

Server RSV-S8 User Manual

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## **1 WELCOME**

RSV-S8 enhances your data storage by combining advanced RAID1 features typically seen on high-end data systems with low cost/high capacity Serial ATA drives. By using industry standard SATA drives and Silicon Image Host Bus Adapters, you can achieve extraordinarily low costs while remaining assured that your data is protected against hardware failure.

## **1.1 PRECAUTION**

Please read the safe precautions carefully before you using RSV-S8 storage appliance. Ensure that you use the product correctly according to the procedure described in this guide.

The following safety precautions are intended to remind you to operate the product safely and correctly. Please read and ensure that you understand them before you proceed to the other sections of this guide.

Do not attempt to disassemble or alter any part of the product that is not describe in this guide.

Do not allow the product to come into contact with water or other liquids.

In the event that water or other liquids enter the interior, immediately unplug the product from the computer. Continued use of the product may result in fire or electrical shock. Please consult your product distributor or the closest support center.

Do not handle the product near a heat source or expose them to direct flame or heat.

Never place the product in close to equipment generating storage electromagnetic fields. Exposure to strong magnetic fields may cause malfunctions or corrupt data.

Can't operate properly under Windows 3.x/ 95 / 98SE/ ME/ NT.

Hard disk drive is not including.

#### **1.2 FEATURES**

#### **1.2.1 DATA SECURITY**

The RSV-S8 software driver includes support for monitoring to predict suspect drives.

RSV-S8 provides our highest commitment to data security through the use of RAID architecture to back up and protect data. RAID levels 1, 10, and 5 provide data security. RSV-S8 supports sophisticated sparing support so that hardware failure risk can be minimized by automatically regenerating the failed disk's data on a backup disk. The RSV-S8 software driver includes support for Self-Monitoring Analysis and Reporting Technology (S.M.A.R.T.2) to predict disk failures. Drives can be moved between controllers without losing data.

#### **1.2.2 DATA PERFORMANCE**

The RSV-S8 can also increase storage throughput by combining the throughput of multiple drives into a single volume. RAID levels 1, 10, and 5 support this ability. Furthermore, each volume can be tailored to provide the best performance for the data contained on that disk.

#### 1.2.3 DATA VERSATILITY

The RSV-S8 software driver also supports Contiguous and Concatenated drives for applications which do not require increased security or performance.

Redundant Array of Independent Devices, a method of combining drives to provide better protection and/or performance.

Self Monitoring, Analysis and Reporting Testing.

For 3132, this requires the use of a Port Multiplier device to access more than one disk per SATA channel.

## 1.3 EASE OF USE

The RSV-S8 utility offers an easy to use utility for creating and managing your storage. It also supports the latest SATA enhancements including SATA-II Port Multiplier support, and up to 3Gbit/sec transfer rates on controllers that support that speed. Creating and deleting volumes is also possible without requiring a restart of the operating system and rebuilds never require the data to be taken off-line.

Drives can also be moved between controllers without losing the data.

## **1.4 SPECIFICATIONS**

- Two eSATA host ports to 8 SATA 3.5-inch hard disks, with hard disk trays & door cover.
- Power and host status LED, and devices status and activity LED.
- Metal chassis (SECC) and plastic panel frame (ABS) design.
- 150 (W) x 340 (H) x 340 (D) mm, NW: 5.5 Kgs, GW: 7.6Kgs.
- Design based on the Silicon Image Sil3726 Port-Multiplier with Sil3132R5 PCI-Express 1X HBA.
- Support Striped (RAID 0), Mirrored (RAID 1), Mirrored Striped (RAID 10), Parity RAID (RAID 5) modes, and hot spare on Mirrored (RAID 1), Mirrored Striped (RAID 10) and Parity RAID (RAID 5) modes.
- Support Contiguous (Single Drive) & Concatenation (Combined Drives) modes.
- 300 watts, 90 to 264Vac / 47~63Hz with VCCI/ FCC/ UL-1950/ C-UL/TUV/ CB/ CCC requirement.
- Single packing (color box) and 2 in 1 outer box.

## **1.5 SUPPORTED OPERATING SYSTEMS**

The following operating systems are supported by the RSV-S8 software driver.

- Windows 2000
- Windows XP, 32/64-bit
- Windows Server 2003, 32/64-bit
- Windows Vista, 32/64-bit

## **1.6 PRODUCT CONTENTS**

The following parts are content.

- Sil3726 Port-Multiplier Box
- Sil3132R5 PCI-Express 1X HBA
- eSATA Cable
- AC Cable
- HDD Screw x 32
- Setup and Installation Driver Repository CD

## **2 AN INTRODUCTION TO RAID**

## 2.1 RAID VOLUMES

RAID technology allows one or more disks to be combined into a logical volume which provides greater performance and/or protection than standard disk drives. These volumes, also known as RAID Groups, appear like regular disk drives to the operating system and can be partitioned, formatted and used just like any other normal disk. The complexity of the RAID is hidden within the driver.

There are several different methods of combining disks, each with its own advantages and disadvantages. Each method is referred to as a RAID "level" such as RAID 1, or RAID 5. The details of each level are summarized below and detailed in the following sections.

RAID LEVEL	CONFIGURED AS	ADVANTAGES	DISADVANTAGES
0	Striped	Excellent performance, low cost	No data protection
1	Mirrored	Excellent data protection	High cost
10	Mirrored Striped	High performance, excellent data protection.	High cost.
5	Parity RAID	Good data protection, good value	Some performance degradation for writes.
Combination	Concatenated	Good performance, low cost, large Volume size	No data protection
Single Drive / Segment	Contiguous	Same as single disk	Same as single disk

## 2.2 SEGMENTING DISKS

For increased versatility, the SATARAID5 software allows individual disks to be divided into smaller segments which can then be combined into different volumes. As an example, if a user has one set of data that must be protected at all costs, another set of data which should be protected at reasonable cost and another set that doesn't need any protection at all; the user can divide three disks into sections as shown in Figure 1. The yellow regions define the high security volume, the greem section is the middle security volume and the light blue shows the unprotected area.

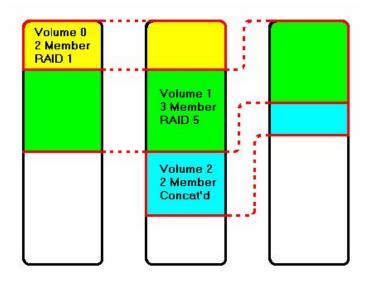


Figure 1: Dividing Disks into Members

## 2.3 RAID LEVELS

#### 2.3.1 DISK STRIPING (RAID 0)

Striping is a performance-oriented, non-redundant data mapping technique. While Striping is discussed as a RAID Group type, it is does not provide any fault tolerance. With modern SATA and ATA bus mastering technology, multiple I/O operations can be performed in parallel, enhancing data throughput. Striping arrays use multiple disks to form a larger virtual disk. The figure below illustrates a three-disk stripe set. Stripe one is written to disk one, stripe two to disk two, and so forth. RAID 0 sets can be comprised of two, three, or four drives. If the sizes of the disk segments are different, the smallest disk segment will limit the overall size of the RAID Group.

$\langle \rangle$		$\langle \rangle$
Stripe0	Stripe1	Stripe2
Stripe3	Stripe4	Stripe5
Stripe6	Stripe7	Stripe8
Stripe9	Stripe10	Stripe11

#### 2.3.2 DISK MIRRORING (RAID 1)

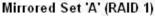
Disk mirroring creates an identical twin for a selected disk by having the data simultaneously written to two disks. This redundancy provides instantaneous protection from a single disk failure. If a read failure occurs on one drive, the system reads the data from the other drive. RAID 1 sets are comprised of two drives, and a third drive can be allocated as a spare in case one of the drives in the set fails. If the sizes of the disk segments are different, the smallest disk segment will limit the overall size of the RAID Group.

$\leq$	
	Block 0
	Block 1
)	Block 2
1	Block 3
·	/

#### 2.3.3 DISK MIRRORING AND STRIPING (RAID 10)

RAID 10 combines the features of both RAID 0 and RAID 1. Performance is provided through the use of Striping (RAID 0), while adding the fault tolerance of Mirroring (RAID 1). The implementation of RAID 10 requires four drives. The drives are assigned as two sets of striped pairs.





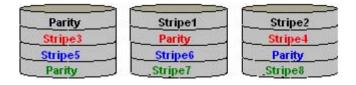
Mirrored Set 'B' (RAID 1)

The data is written to RAID Group A, which is mirrored (RAID 1) and provides data redundancy. Alternating blocks of data are then striped across another RAID 1 mirrored set, shown as Set B in the figure above. This provides improved speed.

Under certain circumstances, a RAID 10 set can sustain multiple simultaneous drive failures.

#### 2.3.4 PARITY RAID (RAID 5)

Parity or RAID 5 adds fault tolerance to Disk Striping by including parity information with the data. Parity RAID dedicates the equivalent of one disk for storing parity stripes. The data and parity information is arranged on the disk array so that parity is written to different disks. There are at least 3 members to a Parity RAID set. The following example illustrates how the parity is rotated from disk to disk. The following example illustrates how the disk.

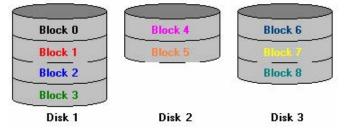


Parity RAID uses less capacity for protection and is the preferred method to reduce the cost per megabyte for larger installations. Mirroring requires 100% increase in capacity to protect the data whereas the above example using three hard drives only requires a 50% increase. The additional required capacity decreases as the number of disks in the group increases (i.e., 33% for four drives or 25% for five drives).

In exchange for low overhead necessary to implement protection, Parity RAID degrades performance for all write operations. The parity calculations for Parity RAID may result in write performance that is somewhat slower than the write performance to a single disk.

#### 2.3.5 CONCATENATION

The Concatenated mode combines multiple disks or segments of disks into a single large volume. It does not provide any data protection or performance improvement but can be useful for utilizing leftover space on disks. Concatenation allows the segments that make up the volume to be of different sizes.



#### 2.3.6 SINGLE DRIVE / SEGMENT

The single drive is a virtual disk that can either be an entire disk drive or a segment of a single disk drive. Single drive is the "Contiguous" configuration option when creating RAID Groups (or sets) in the SATARAID5 software.

## 2.4 RAID VOLUME STATUS

A RAID volume can be in any one of the following statuses.

STATUS	MEANING
Good	All disks are currently functioning as normal.
Reduced	For RAID levels that provide data protection, one or more disks have failed but the data is still available via the RAID algorithms. The failed disk should be replaced as soon as possible to avoid loss of data.
Rebuilding	A failed disk drive has been replaced and the data is being regenerated on the replacement disk. When complete, the RAID Group will return to Good status.
Resynchronizing	An error has occurred and RAID algorithms be regenerated on this RAID Group. When complete, the RAID Group will return to Good status.
Failed	One or more disks have failed and RAID algorithms can no longer regenerate the data. The minimum number of failures required to reach this state depends on the RAID level: RAID 0, Concatenated, Contiguous: Single disk failure. RAID 1, 10, and 5: Two disk failure.

## **3 INSTALLATION**

## **3.1 COMPONENTS**

There are three separate steps that must be install or setup for RSV-S8 to function. These components are the HARDWARE, SATA RAID5 HBA DRIVER, and SATARAID5 Utility. The steps on how to setup these packages is described in the following sections.

## **3.2 INSTALLING HARDWARE**

Follow the descriptions below, and step by step to complete the installation.

Turn off your host computer.

Install the Sil3132 PCI-Express 1X SATA RAID5 HBA into a PCI-Express slot (1X ~ 16X), than connect one end of the eSATA cable to the eSATA connector on the Sil3132 PCI-Express 1X SATA RAID5 HBA.

Connect the other end to the eSATA connecter on CFI-B8083ER.

If hard disk drives are not installed in CFI-B8083ER, mount the HDD into the tray and twist the drive screw properly fix, than insert the drive tray most of the way into bay 1 to 8 in order (from the bottom to top); gently insert the drive until the drive is fully inserted, and shut the tray handle to seat the drive securely.

Attach one end of the AC power cord to RSV-S8 and the other end to the proper AC receptacle.

Turn on CFI-B8083ER, than turn on the host computer.

## 3.3 INSTALLING ON WINDOWS 2000

#### 3.3.1 INSTALLING SATA RAID HOST BUS ADAPTER

Follow the descriptions below, and step by step to complete the setup.

Insert the Setup and Installation Repository CD in the CD-ROM drive. When start the Windows O/S, new hardware will be found, click **Next**>.

Found New Hardware Wizar	d
	Welcome to the Found New Hardware Wizard This wizard helps you install a device driver for a hardware device.
	To continue, click Next.
	< Back Next > Cancel

Select Search for a suitable driver for my device (recommended), than click Next>.



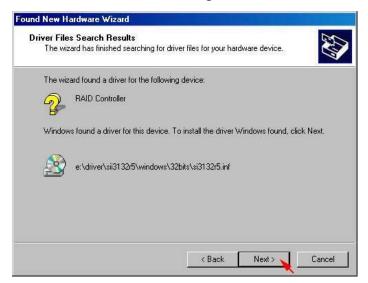
Select Specify a location, than click Next>.

Found New Hardware Wizard	
Locate Driver Files Where do you want Windows to search for	driver files?
Search for driver files for the following hardv	vare device:
RAID Controller	
The wizard searches for suitable drivers in it any of the following optional search location	
To start the search, click Next. If you are se insert the floppy disk or CD before clicking N	
Optional search locations:	
Floppy disk drives	
CD-ROM drives	
Specify a location	
Microsoft Windows Update	
	< Back Next > Cancel

Click Browse... to select to driver path, than click OK.

Found No	ew Hardware Wizard	×
2	Insert the manufacturer's installation disk into the drive selected, and then click DK.	OK Cancel
	Copy manufacturer's files from: E:\Driver\Sil3132R5\Windows\32bits	Browse

Click Next> to install the Silicon Image Sil3132 SoftRaid 5 Controller driver.



Click Yes to pass the Microsoft digital signature and continue the installation.

Digital Signature Not	Found
3	The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
	The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
	Silicon Image Sil 3132 SoftRaid 5 Controller
	If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.
	Do you want to continue the installation?
	Yes No More Info

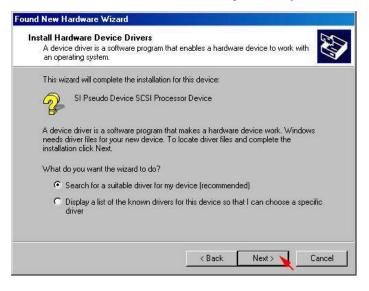
When the Silicon Image Sil3132 SoftRaid 5 Controller installation has completed, click Finish, and begin to the Silicon Image's Pseudo Processor Device driver installation.

Found New Hardware Wizard	
	Completing the Found New Hardware Wizard Silicon Image Sil 3132 SoftRaid 5 Controller Windows has finished installing the software for this device.
	To close this wizard, click Finish.

Windows will find the Silicon Image's Pseudo Processor Device hardware, click Next>.



Select Search for a suitable driver for my device (recommended), than click Next>.



Select Specify a location, than click Next>.

arch for driver files for the following hardware device: SI Pseudo Device SCSI Processor Device e wizard searches for suitable drivers in its driver database on you of the following optional search locations that you specify. start the search, click Next. If you are searching on a floppy disk at the floppy disk or CD before clicking Next.	Ir computer and in
e wizard searches for suitable drivers in its driver database on you of the following optional search locations that you specify. start the search, click Next. If you are searching on a floppy disk	ir computer and in
of the following optional search locations that you specify. start the search, click Next. If you are searching on a floppy disk.	ir computer and in
at the hoppy disk of CD before clicking Next.	or CD-ROM drive,
tional search locations:	
Floppy disk drives	
CD-ROM drives	
Specify a location	
Microsoft Windows Update	

Click Browse... to select to driver path, than click OK.



Click Next> to install the Silicon Image's Pseudo Processor Device driver.



When the Silicon Image's Pseudo Processor Device installation has completed, click Finish.

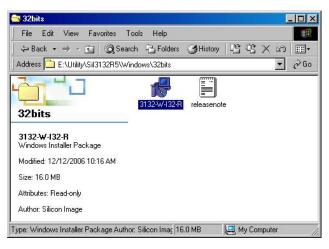
ïnish.
F

#### 3.3.2 INSTALLING SATARAID5 UTILITY

Follow the descriptions below, and step by step to complete the installation.

Open the Setup and Installation Repository CD and select the SATARAID5 Array Manager software from the Utility folder.

Double-click the 3132-W-I32-R.exe file.



Click <u>Next></u> to begin setup.



Select I Agree, than click Next>.



Select Place shortcut on Desktop, than click <u>Next></u> to create a shortcut on the desktop.



Click **Next>** to use the default installation folder.

@ 3132-₩-I32-R SATARAID5	
Select Installation Folder	<b>R</b>
The installer will install 3132-W-I32-R SATARAID5 to the following	folder.
To install in this folder, click "Next". To install to a different folder, (	enter it below or click "Browse".
<u>F</u> older:	
C:\Program Files\Silicon Image\3132-W-I32-R SATARAID5\	B <u>r</u> owse
	<u>D</u> isk Cost
Cancel	< Back Next > 🔪

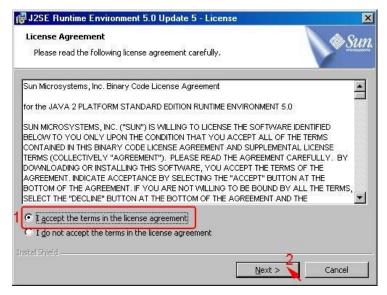
Click **<u>N</u>ext>** to begin the installation.

3132-W-I32-R SATARAID5			
The installer is ready to install 3132-W-K	32-R SATARAID5 or	n your computer.	
Click "Next" to start the installation.			
	Cancel	< <u>B</u> ack	Next >

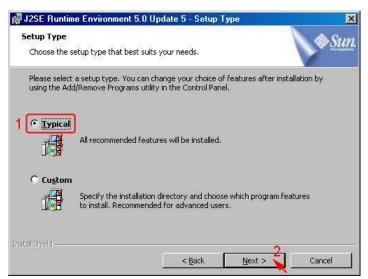
When SATARAID5 installation has completed, click **Close** to exit.

3132-w-132-R SATARAID5			
3132-W-132-R SATARAID5 has beer	n successfully installed.		
Click "Close" to exit.			
	Cancel	< <u>B</u> ack	

Select I <u>agree the terms in the license agreement</u>, than click <u>Next></u> to begin the Java platform installation.



Select Typical, than click Next>.



When Java platform installation has completed, click **<u>Finish</u>** to exit.

🔂 J2SE Runtime Environ	ment 5.0 Update 5 - Complete	×
	Installation Completed	
	The Install Wizard has successfully installed J2SE Runtime Environment 5.0 Update 5. Click Finish to exit the wizard.	
♦ Sun Java		
	< Back Finish Cancel	

Select Start > Programs > Silicon Image > SATARaid5Manager to start the Array Manager software.

#### 3.3.3 DISK DRIVE MODE SETUP

Please refer to the chapter 4.

#### **3.3.4 ALLOCATING PARTITION**

Before creating any partitions, RAID groups must first be created using the SATARaid5Manager utility. Once the sets have been created, allow the system to load Windows.

Right-click on My Computer icon and select Manage from the pop-up menu.

My Documents			
My Computer			
	<b>Open</b> Explore		
62	Search		
My Network Places	Manage Map Network Drive	r .	
	Disconnect Network Drive		
3	Create Shortcut		
Recycle Bin	Rename		
	Properties	l .	
Internet Explorer			
<b>S</b>			
SATARaid5			
17 million - 18			
Start	🖞 🍪 😂 🗞 🔌	(*, *, *, *, *, *, *, *, *, *, *, *, *, *	5:38 PM

Select Disk Management under Storage to view the disk drives.

Event Viewer	<ul> <li>system (C:)</li> <li>backup (D:)</li> <li>NA1014008A (E:)</li> </ul>	Partition Partition	Basic Basic	NTFS NTFS	Healthy (System
🖻 🕵 System Tools		Partition	Basic	CDFS	Healthy Healthy
	Image: Construction of the sector of the sec	<b>vstem (C:)</b> 1.75 GB NTFS ealthy (System)	backu 59.77 Health	<b>ир (D:)</b> GB NTFS У	
	163 MB 16	A1014008A (E:) 33 MB CDFS ealthy			

When Write Signature and Upgrade Disk Wizard appears, click Next>.

Write Signature and Upgrad	e Disk Wizard	×
	Welcome to the Write Signature and Upgrade Disk Wizard. This wizard writes signatures on new disks, and upgrades empty basic disks to dynamic disks. You can use dynamic disks to create software-based RAID volumes, which can be mirrored and striped or spanned across disks. You can also expand single-disk and spanned volumes without having to restarting the computer. After you upgrade a disk, you cannot use earlier versions of Windows on any volume on that disk. To continue, click Next.	
	Do not show this wizard again	
	Next > Cancel	

Select the new disk to write a signature, than click **<u>Next></u>**.

rite Signature and	l Upgrade Disk Wiz	ard		
Select Disk to V Choose the di	<b>∀rite Signature</b> sks on which you want I	o write a signature.		
Select the disk	s on which you want to	write a signature:		
1 Disk 1				
			<b>)</b>	

Do not click any disk to upgrade to dynamic disk, than click Next>.

rite Signature and Upgrade Disk Wizard		
Select Disks to Upgrade Choose the disks to be upgraded.		
Select the disks you want to upgrade:		
1 Disk 1		
	< Back Next >	Cancel
		Caricel

When the Write Signature and Upgrade Disk Wizard has completed, click Finish.

Write Signature and Upgrad	e Disk Wizard	×
	Completing the Write Signature and Upgrade Disk Wizard You have successfully completed the Write Signature and Upgrade Disk Wizard.	
	You have selected these settings:	
	Write a signature on the following disks: Disk 1 Upgrade the following disks: None	
	To close this wizard, click Finish.	
	K Back Finish K Cance	el

Right-click on the **Unallocated** partition and select **Create Partition...** from the pop-up menu.

Tree	Volume	Layout	Туре	File System	Status
Computer Management (Local)  System Tools  System Tools  System Information  System Information  Shared Folders  Cocal Users and Groups  Storage  Disk Management  Disk Management  Storage  Removable Storage  Services and Applications	<ul> <li>system (C:)</li> <li>backup (D:)</li> <li>NA1014008A (E:)</li> </ul>	Partition Partition Partition	Basic Basic Basic	NTFS NTFS CDFS	Healthy (System Healthy Healthy
	Disk 0 Basic 74,52 GB Online	<b>system (C:)</b> 14.75 GB NTFS Healthy (System)	back 59.77 Health	<b>ир (D:)</b> GB NTFS У	
	CP Disk 1 Basic 1397.27 GB Online	1397.27 GB Unallocated		Create Partiti Properties	on
	CDRom 0     DVD (E:)     163 MB     Online	NA1014008A (E: 163 MB CDFS Healthy	1	Help	

Click **<u>Next></u>** to create a partition on a basic disk.

Create Partition Wizard	×
	Welcome to the Create Partition Wizard This wizard helps you create a partition on a basic disk. A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. A basic disk may also contain volumes created with Windows NT 4.0 and earlier. You can also use MS-DOS to gain access to partitions on basic disks. To continue, click Next.
	K Bapk Next > Cancel

Select the partition type you want to create, than click Next>.

Create Partition Wizard	x
Select Partition Type You can specify what type of partition	to create.
Select the type of partition you want to 1  Primary partition Extended partition C Docioal drive	o create:
Description A primary partition is a volume you Windows 2000 and other operating	create using free space on a basic disk. 3 systems can start from a primary partition. partitions on a basic disk, or you can make nded partition.
	< Back Next > Cancel

Specify the partition size you want to create, than click Next>.

Choose a partition size that is smaller than the maximum disk space: Maximum disk space: Minimum disk space: Amount of disk space to use: MB MB	pecify Partition Size How big do you want the partiti	ion to be?
Minimum disk space: 7 MB	Choose a partition size that is s	maller than the maximum disk space.
	Maximum disk space:	1430805 MB
Amount of disk space to use: 1 1430805 MB	Minimum disk space:	7 MB
	Amount of disk space to use:	1430805 mB

Assign the drive letter or path you want to create, than click Next>.

4		
ų	Assign a drive letter: F:	
	C Mount this volume at an empty folder that supports drive paths: Browse	
	C Do not assign a drive letter or drive path	
	C Do not assign a drive letter or drive path	

Click Format this partition with the following settings and Perform a Quick Format, setup the File system to use, Allocation unit size, Volume label, than click Next>.

	an customize the formattin	3
0	y whether you want to form Do not format this partition	1
10	Format this partition with t	he following settings:
	Formatting File system to use:	NTFS
3	Allocation unit size:	Default
	Volume label:	New Volume
2	Perform a Quick Fo	rmat Enable file and folder compression

When the Create Partition Wizard has completed, click Finish.

Completing the Create Partition Wizard
WIZAFU
You have successfully completed the Create Partition Wizard.
You specified the following settings:
Partition type: Primary Partition Disks Selected: Disk 1 Partition size: 1430805 MB Drive letter or path: F: File System: NTFS Allocation Unit Size: Default Volume Labet: New Volume
To close this wizard, click Finish.
< Back Finish 🔪 Cancel

The status of the newly created partition in the Disk Management window should change to Formatting and the percentage complete will be displayed. Depending upon the size of the partition, the format process may take several minutes. When complete, the status will change to "Healthy" and the name and drive letter will be updated. Once the disk reports Healthy, it appears in the listing in System Listing section with all of its pertinent information as well.

📮 Computer Management					
Action ⊻iew	12 🛛 🔯				
Tree	Volume	Layout	Туре	File System	Status
Computer Management (Local) 	<ul> <li>system (C:)</li> <li>backup (D:)</li> <li>New Volume (F:)</li> <li>NA1014008A (E:)</li> </ul>	Partition Partition Partition Partition	Basic Basic Basic Basic	NTFS NTFS NTFS CDFS	Healthy (System) Healthy Healthy Healthy
Device Manager     Social Users and Groups     Storage     Disk Management     Social Disk Defragmenter     Social Drives	▼ Disk 0 Basic 74.52 GB Online	system (C:) 14.75 GB NTFS Healthy (System)		<b>ир (D:)</b> GBNTFS У	<u>,</u>
⊕	Contemporary Disk 1 Basic 1397.27 GB Online	New Volume (F:) 1397.27 GB NTFS Healthy			
	CDRom 0 DVD (E:) 163 MB Online	NA1014008A (E:) 163 MB CDFS Healthy			
	Primary Partition	Extended Partition	Logical Drive	3	

Repeat the above procedure as needed for any other partitions. Close the Data Management window by clicking on the small boxed "X" in the top right corner of the window. Click on the "My Computer" icon on the Desktop. The new drives will be visible and properly named. The new disks are available for use.

🖳 My Computer				- O ×
File Edit View Favorites To	ols Help			
📙 🖨 Back, 👻 🤿 👻 🗎 🧟 Search	n 🖳 Folders	GHistory	管轄X:	∩
Address 🖳 My Computer				▼ 🖓 Go
	3½ Floppy (A:)	system (C:)	ackup (D:)	NA1014008A
My Computer				(E:)
New Volume (F:) Local Disk	New Volume (F:)	Control Panel	@C:\Program Files\Commo	
Capacity: 1.36 TB			Files (Commo	
🔲 Used: 108 MB				
Free: 1.36 TB				
Free Space: 1.36 TB, Capacity: 1.36 TB			🖳 My Coi	mputer //

## 3.4 INSTALLING ON WINDOWS XP (32/64-BIT)

#### 3.4.1 INSTALLING SATA RAID HOST BUS ADAPTER

Follow the descriptions below, and step by step to complete the setup.

Insert the Setup and Installation Repository CD in the CD-ROM drive. When start the Windows O/S, new hardware will be found; Select **No, not this time**, than click **Next>**.

Found New Hardware Wi	zard
	Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Read our privacy policy
F	Can Windows connect to Windows Update to search for software? Yes, this time only Yes, now and every time I connect a device Sono, not this time
	< Back Next > Cancel

Select Install from a list or specific location (Advanced), than click Next>.



Select Search for the best driver in there location, Include this location in the search, and click **Browse** to select the driver path, than click **Next>.** 

# Driver path for Windows 32-bit:

Please choose your search and installation options.	Found New Hardware Wizard
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.	Please choose your search and installation options.
2 Include this location in the search: E:\Driver\Sil3132R5\\/indows\32bits Browse	Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.  Search removable media (floppy, CD-ROM)  Include this location in the search:
O Don't search. I will choose the driver to install. Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.	Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.

# Driver path for Windows 64-bit:

ound Nev	v Hardware Wizard
Please	choose your search and installation options.
	earch for the best driver in these locations. se the check boxes below to limit or expand the default search, which includes local aths and removable media. The best driver found will be installed.
2	Search removable media (floppy, CD-ROM)  Include this location in the search:  E:\Driver\Sil3132R5\Windows\64bits Browse Browse
C	on't search. I will choose the driver to install. hoose this option to select the device driver from a list. Windows does not guarantee tha e driver you choose will be the best match for your hardware.
	3
	K Back Next > 🔪 Cancel

When the installation has completed, click Finish.

Found New Hardware Wi	
	Completing the Found New Hardware Wizard The wizard has finished installing the software for:
R.W.	Silicon Image Sil 3132 SoftRaid 5 Controller
	Click Finish to close the wizard.

## 3.4.2 INSTALLING SATARAID5 UTILITY

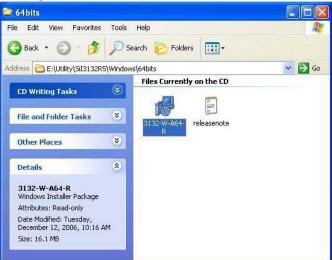
Follow the descriptions below, and step by step to complete the installation.

Open the **Setup and Installation Repository CD** and **select the SATARAID5 Array Manager software** from the Utility folder.

Double-click the utility file.



# Utility for Windows 64-bit:



Click <u>Next></u> to begin setup.



Select I Agree, than click Next>.

3132-W-132-R SATARA	ID5	
License Agreemen	t 🛐	ļ
Please take a moment to read t Igree", then "Next". Otherwise	he license agreement now. If you accept the terms below, click "I click "Cancel".	
-		
SOFT	Silicon Image, Inc. WARE LICENSE AGREEMENT	-
CAREFULLY BEFO	E FOLLOWING TERMS AND CONDITIONS DRE DOWNLOADING, INSTALLING OR VARE OR ANY ACCOMPANYING N (COLLECTIVELY, THE "SOFTWARE").	
THE TERMS AND	CONDITIONS OF THIS SOFTWARE	~
O I Do Not Agree	1 OIAgree	
	Cancel < Back Next >	2

Select Place shortcut on Desktop, than click <u>Next></u> to create a shortcut on the desktop.

🖶 3132-W-I32-R SATARAID5		
Do you want to add a s	hortcut to your Desktop?	R.
1 Place shortcut on Desktop		
	Cancel < Back	Next >

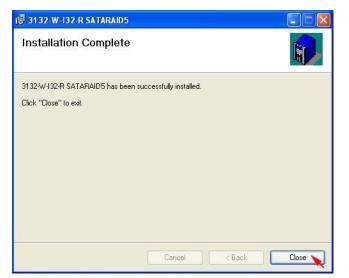
Click  $\underline{Next}$  to use the default installation folder.

3132-W-I32-R SATARAID5	
Select Installation Folder	5
The installer will install 3132-W-I32-R SATARAID5 to the following folder.	
o install in this folder, click "Next". To install to a different folder, enter it be	low or click "Browse".
Folder:	
C:\Program Files\Silicon Image\3132-W-I32-R SATARAID5\	Browse
	Disk Cost

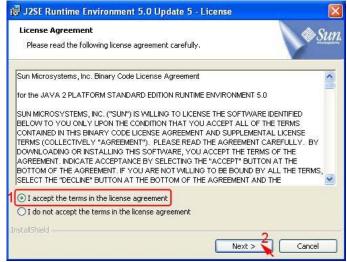
Click **<u>N</u>ext>** to begin the installation.

🔀 3132-W-I32-R SATARAID5	🛛
Confirm Installation	
The installer is ready to install 3132-W-I32-R SATARAID5 on your computer.	
Click "Next" to start the installation.	
Cancel < Back	Next > 🔪

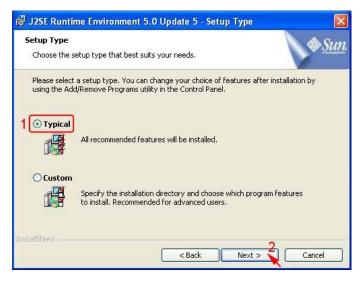
When SATARAID5 installation has completed, click **Close** to exit.



Select I <u>accept the terms in the license agreement</u>, than click <u>Next></u> to begin the Java platform installation.



Select **Typical**, than click **Next>**.



When Java platform installation has completed, click **Finish** to exit.

👹 J2SE Runtime Environm	ent 5.0 Update 5 - Complete 🛛 🔀
	Installation Completed
	The Install Wizard has successfully installed J2SE Runtime Environment 5.0 Update 5. Click Finish to exit the wizard.
♦ Sun. Java	
	< Back Finish Cancel

Select Start > All Programs > Silicon Image > SATARaid5Manager to start the Array Manager software.

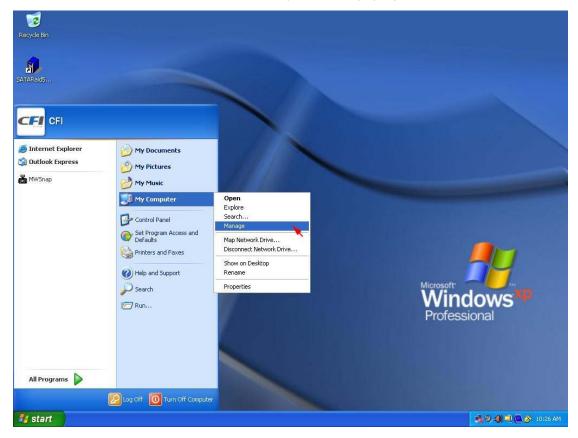
#### **3.4.3 DISK DRIVE MODE SETUP**

Please refer to the chapter 4.

#### 3.4.4 ALLOCATING PARTITIONS ON WINDOWS XP 32-BIT

Before creating any partitions, RAID groups must first be created using the SATARaid5Manager utility. Once the sets have been created, allow the system to load Windows.

Right-click on My Computer icon and select Manage from the pop-up menu.



Select Disk Management under Storage to view the disk drives.

🖳 Computer Management					
📕 File Action View Window Hel	p				<u>_8×</u>
Computer Management (Local)	Volume System (C:) backup (D:) NA1014008A (E:)	Layout Partition Partition Partition	Type Basic Basic Basic	File System NTFS NTFS CDFS	Status Healthy (System) Healthy Healthy
Borge     Storage     Storage     Disk Defragmenter     Disk Management     Services and Applications	< @Disk 0	in c			
	Basic 74.52 GB	<b>system (C:)</b> 14.75 GB NTFS Healthy (Syste	5	<b>backup (D</b> 59.77 GB NT Healthy	
	163 MB	<b>NA1014008A</b> 163 MB CDFS Healthy	N (E:)		
	Primary partition	Extended par	rtition 📘 Log	jical drive	

When Initialize and Convert Disk Wizard appears, click Next>.

Initialize and Convert Disk	Wizard
	Welcome to the Initialize and Convert Disk Wizard This wizard helps you to initialize new disks and to convert empty basic disks to dynamic disks. You can use dynamic disks to create software-based RAID volumes that can be mirrored, or they can be striped or spanned across multiple disks. You can also expand single-disk and spanned volumes without having to restart the computer. After you convert a disk to dynamic, you can only use Windows 2000 and later versions of Windows on any volume of that disk. To continue, click Next.
	K Back Next > Cancel

Select the new disk to initialize, than click  $\underline{N}ext$ >.

Initialize and Convert Disk Wizard	
Select Disks to Initialize You must initialize a disk before Logical Disk Manager can access it.	
Select one or more disks to initialize. Disks: 1 Disk1	
< Back Next >	Cancel

Do not click any disk to convert, than click Next>.

Initialize and Convert Disk Wizard	
Select Disks to Convert The disks you select will be converted to dynamic disks.	
Select one or more disks to convert:	
Disks:	
KBack	Next > Cancel

When the Initialize and Convert Disk Wizard has completed, click Finish.

Initialize and Convert Disk	c Wizard	×
	Completing the Initialize and Convert Disk Wizard You have successfully completed the Initialize and Convert Disk Wizard. You selected the following settings: Initialize: Disk 1 Convert: None	
	K Back Finish Cancel	

Right-click on the **Unallocated** partition and select **New Partition...** from the pop-up menu.

🖳 File Action View Window Hel	P				_ 8 ×
Computer Management (Local)  System Tools  Given Tools	Volume System (C:) backup (D:) NA1014008A (E:	Layout Partition Partition ) Partition	Type Basic Basic Basic	File System NTFS NTFS CDFS	Status Healthy (System) Healthy Healthy
	CDisk 0 Basic 74.52 GB Online	<b>system (C:)</b> 14.75 GB NTF5 Healthy (System)		<b>kup (D:)</b> 7 GB NTFS thy	
	Disk 1 Basic 1397.27 GB Online	1397.27 GB Unallocated		New Partiti Properties	<sup>0n</sup>
	DVD 163 MB Online	NA1014008A (E:) 163 MB CDFS Healthy		Help	

Click **<u>Next></u>** to create a partition on a basic disk.

New Partition Wizard	
	Welcome to the New Partition Wizard This wizard helps you create a partition on a basic disk. A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. You can use any version of Windows or MS-DDS to gain access to partitions on basic disks. To continue, click Next.
	K Back Next > Cancel

Select the partition type you want to create, than click Next>.

elect Partition Type There are three types of	partitions: primary, extended, and logical.
Select the partition you w	ant to create:
1 💿 Primary partition	
O Extended partition	
C Logical drive	
Description	
Windows and other or	volume you create using free space on a basic disk. perating systems can start from a primary partition. You can ary partitions or three primary partitions and an extended

Specify the partition size you want to create, than click Next>.

New Partition Wizar	d		
Specify Partition S Choose a partition		e maximum and minimum sizes.	
Maxium disk spac Minimum disk spa Partition size in Mi		1430805 8	
		< Back Next > 2	Cancel

Assign the drive letter or path you want to create, than click Next>.

	ign Drive Letter or Path For easier access, you can assign a drive letter or drive path to your partition.	
	• Assign the following drive letter:	
-	Mount in the following empty NTFS folder:	
(	O Do not assign a drive letter or drive path	
	0	

Click Format this partition with the following settings and Perform a quick format, setup the File system, Allocation unit size, Volume label, than click Next>.

Choo	ose whether you want to form	nat this partition, and if s	o, what settings you	want to use.
	) Do not format this partition ) Format this partition with th			
16	File system:	NTFS		
3	Allocation unit size:	Default	~	
	Volume label:	New Volume		
2	Perform a quick form	iat		
	Enable file and folde	r compression		

When the New Partition Wizard has completed, click Finish.

New Partition Wizard		X
	Completing the New Partition Wizard You have successfully completed the New Partition Wizard. You selected the following settings:	
	Partition type: Primary partition Disk selected: Disk 1 Partition size: 1430805 MB Drive letter or path: F: File system: NTFS Allocation unit size: Default Volume labet: New Volume Duick format: Yes	
	To close this wizard, click Finish.	el

The status of the newly created partition in the Disk Management window should change to Formatting and the percentage complete will be displayed. Depending upon the size of the partition, the format process may take several minutes. When complete, the status will change to "Healthy" and the name and drive letter will be updated. Once the disk reports Healthy, it appears in the listing in System Listing section with all of its pertinent information as well.

JFile Action View Window Help					_8×
← → 🗈 📧 😫 🗙 😭 (			1	1 .	1
Computer Management (Local) System Tools Fail Event Viewer Construction Constructi	Volume System (C:) backup (D:) New Volume (F:) NA1014008A (E:		Type Basic Basic Basic Basic	File System NTFS NTFS NTFS CDFS	Status Healthy (System) Healthy Healthy Healthy
Storage  Removable Storage  Disk Defragmenter  Disk Management  Services and Applications	Conline	<b>system (C:)</b> 14.75 GB NTF5 Healthy (System)		<b>kup (D:)</b> 7 GB NTFS thy	
	CDisk 1 Basic 1397.27 GB Online	New Volume (F:) 1397.27 GB NTFS Healthy			
	DVD DVD 163 MB Online	NA1014008A (E: 163 MB CDF5 Healthy	)		
	Primaru partition	Extended partition	Logical d	rive	

Repeat the above procedure as needed for any other partitions. Close the Data Management window by clicking on the small boxed "X" in the top right corner of the window. Click on the "My Computer" icon on the Desktop. The new drives will be visible and properly named. The new disks are available for use.

💈 My Computer		
File Edit View Favorites Tools	Help	<b></b>
🕝 Back - 🕥 - 🏂 🔎	Search 🎼 Folders 🛄 -	
Address 😼 My Computer		👻 🔁 Go
System Tasks 🛞	Files Stored on This Computer	
<ul> <li>View system information</li> <li>Add or remove programs</li> <li>Change a setting</li> </ul>	Shared Documents CFI's Documents	
9	Hard Disk Drives	
Other Places 🙁	system (C:) Sackup (D:)	
My Network Places     My Documents     Shared Documents     Control Panel	New Volume (F:)	
Details (\$	Devices with Removable Storage	
New Yolume (F:) Local Disk File System: NTFS Free Space: 1.36 TB Total Size: 1.36 TB	31/2 Floppy (A:) NA1014008A (E:) Other Nero Scout	
	~	

#### 3.4.5 ALLOCATING PARTITIONS ON WINDOWS XP 64-BIT

Before creating any partitions, RAID groups must first be created using the SATARaid5Manager utility. Once the sets have been created, allow the system to load Windows.

Right-click on My Computer icon and select Manage from the pop-up menu.



Select Disk Management under Storage to view the disk drives.

IJ File Action View Window He ← → 🔁 📧 😢 छ	elp				_8
Computer Management (Local)	Volume System (C:) Dackup (D:) NA1014008A (E:	Layout Partition Partition ) Partition	Type Basic Basic Basic	File System NTFS NTFS CDFS	Status Healthy (System) Healthy Healthy
Device Manager     Storage     Disk Defragmenter     Disk Management     Disk Management     Services and Applications	Conline	system (C:) 14.75 GB NTFS Healthy (System)	)	<b>backup (D</b> : 59.77 GB NTF Healthy	
	DVD 163 MB Online	NA1014008A 163 MB CDFS Healthy	(E:)	-	

When Initialize and Convert Disk Wizard appears, click Next>.

Initialize and Convert Disk	Wizard
	Welcome to the Initialize and Convert Disk Wizard This wizard helps you to initialize new disks and to convert empty basic disks to dynamic disks. You can use dynamic disks to create software-based RAID volumes that can be mirrored, or they can be striped or spanned across multiple disks. You can also expand single-disk and spanned volumes without having to restart the computer. After you convert a disk to dynamic, you can only use Windows 2000 and later versions of Windows on any volume of that disk. To continue, click Next.
	K Back Next > Cancel

Select the new disk to initialize, than click  $\underline{N}ext$ >.

Initialize and Convert Disk Wizard	
Select Disks to Initialize You must initialize a disk before Logical Disk Manager can access it.	
Select one or more disks to initialize. Disks: 1 I Disk 1	
A Back Next	> Cancel

Do not click any disk to convert, than click Next>.

nitialize and Convert Disk Wizard	
Select Disks to Convert The disks you select will be converted to dynamic disks	
Select one or more disks to convert:	
Disks:	

When the Initialize and Convert Disk Wizard has completed, click Finish.

Initialize and Convert Disk	c Wizard
	Completing the Initialize and Convert Disk Wizard You have successfully completed the Initialize and Convert Disk Wizard. You selected the following settings: Initialize to MBR: Disk 1 Convert: None
	< Back Finish Cancel

Windows 64-bit system supports GPT disk which supports disk volume greater than 2TB.

⇔ → 🗈 🖬 😫 📓					
Computer Management (Local)     System Tools     Sorrer Verent Viewer     Sorrer Shared Folders     Device Manager     Device Manager     Sorrage     Sorrage     Disk Defragmenter     Disk Services and Applications	Volume System (C:) backup (D:) NA1014008A (E	Layout Partition Partition :) Partition	Type Basic Basic Basic	File System NTFS NTFS CDFS	Status Healthy (System) Healthy Healthy
	Colline	system (C:) 14.75 GB NTFS Healthy (System)	59	ickup (D:) .77 GB NTFS althy	-
	CPDisk 1 Basic 2794.53 GB Online	2048.00 GB Unallocated		746.54 G Unallocat	
	CD-ROM 0 DVD 163 MB Online	NA1014008A ( 163 MB CDFS Healthy	E:)		

Right-click on the **Basic disk** and select **Convert to GPT disk** from the pop-up menu.

및 File Action View Window Help (中 - → 101) 配 留 段 (計 留 殿					_ 8
Scomputer Management (Local)	Volume	Layout	Туре	File System	Status
System Tools     Sore Vertex Viewer     Shared Folders     Shared Folders     More Formance Logs and Alerts     More Formance Logs     Device Manager     More Formance Logs     Device Manager     Device Manager     Device Manager     Device Manager     Device Manager     Device Manager     Storage     Device Manager     Device Manager     Device Manager     Device Manager     Device Manager     Device Manager     Storage     Device Manager     Device Manager     Storage     Device Manager     Device Ma	System (C:) backup (D:) NA1014008A (E:	Partition Partition ) Partition	Basic Basic Basic	NTES NTES CDES	Healthy (System) Healthy Healthy
	Contraction Contractico Contra	system (C:) 14.75 GB NTFS Healthy (System)	59.	<b>:kup (D:)</b> 77 GB NTFS althy	
	CDisk 1 Basic 2794.53 GB Online	2048.00 GB Convert to Dynar	nic Disk	746.54 G Unallocat	
	DVD 163 MB	Convert to GPT D Properties	iisk 🔪		
	Online	Help	F		

Right-click on the **Unallocated** partition and select **New Partition...** from the pop-up menu.

🖳 File Action View Window Hel 🗢 🕂 🗈 🖬 😢 😰 💕	p				
<ul> <li>Computer Management (Local)</li> <li>System Tools</li> <li>System Tools</li> <li>Shared Folders</li> <li>Local Users and Groups</li> <li>Performance Logs and Alerts</li> <li>Device Manager</li> <li>Storage</li> <li>Removable Storage</li> <li>Disk Defragmenter</li> <li>Disk Daragement</li> <li>Services and Applications</li> </ul>	Volume System (C:) backup (D:) NA1014008A (E	Layout Partition Partition :) Partition	Type Basic Basic Basic	File System NTFS NTFS CDFS	Status Healthy (System) Healthy Healthy
	CDisk 0 Basic 74.52 GB Online	<b>system (C:)</b> 14.75 GB NTFS Healthy (System)	59	<b>ckup (D:)</b> 77 GB NTFS althy	
	CPDisk 1 Basic 2794.42 GB Online	2794.42 GB Unallocated		New Par Propertie	
	DVD 163 MB Online	NA1014008A (E: 163 MB CDF5 Healthy	>	Help	

Click **<u>N</u>ext>** to create a partition on a basic disk.

New Partition Wizard	
	Welcome to the New Partition Wizard This wizard helps you create a partition on a basic disk. A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. Partitions created on Master Boot Record (MBR) disks can be accessed from any version of Windows or MS-DOS.
	Partitions created on GUID Partition Table (GPT) disks can only be accessed from Windows Server 2003 Service Pack 1 or later, or from any 64-bit version of Windows. To continue, click Next.
	< Back Next > Cancel

Select the partition to create, than click Next>.

iel	ect Partition Type There are three types of partitions: primary, extended, and logical.
3	Select the partition you want to create:
1	Primary partition
	O Extended partition
	O Logical drive
	Description
	A primary partition is a volume you create using free space on a basic disk. Windows and other operating systems can start from a primary partition. You can create up to 128 primary partitions on a GPT basic disk. On a Master Boot Record (MBR) basic disk, you can create up to four primary partitions or three primary partitions and an extended partition.
	< Back Next > 2 Cance

Specify the partition size you want to create, than click Next>.

Specify Partition Size Choose a partition size that is between th	ne maximum and minimum sizes.
Maxium disk space in megabytes (MB): Minimum disk space in MB: Partition size in MB: 1	2861487 8 2861487
	< Back Next > Cancel

Assign the drive letter or path you want to create, than click Next>.

New Partition Wizard	
Assign Drive Letter or Path For easier access, you can assign a drive letter o	or drive path to your partition.
1 O Assign the following drive letter:	F
Mount in the following empty NTFS folder:	Browse
Do not assign a drive letter or drive path	
	< Back Next > Cancel

Click Format this partition with the following settings and Perform a quick format, setup the File system, Allocation unit size, Volume label, than click Next>.

Choo	ose whether you want to form	nat this partition, and if s	o, what settings you	u want to use.
C	Do not format this partition			
1 🤇	Format this partition with th	e following settings:		
	File system:	NTFS	~	
3	Allocation unit size:	Default	~	
	Volume label:	New Volume		
2	Perform a quick form	at		
20	Enable file and folder			

Completing the New Partition Wizard
You selected the following settings: Partition type: Primary partition Disk selected Disk 1 Partition size: 2861487 MB Drive letter or path. F: File system: NTFS Allocation unit size: Default Volume label: New Volume Duick format: Yes To close this wizard, click Finish.
Kack Finish Cancel

When the New Partition Wizard has completed, click Finish.

The status of the newly created partition in the Disk Management window should change to Formatting and the percentage complete will be displayed. Depending upon the size of the partition, the format process may take several minutes. When complete, the status will change to "Healthy" and the name and drive letter will be updated. Once the disk reports Healthy, it appears in the listing in System Listing section with all of its pertinent information as well.

📕 Computer Management					
📕 File Action View Window Help	)				X
	🖻 🔯 📓				
Computer Management (Local) System Tools System Tools Shared Folders Cocal Users and Groups Cocal Users and Alerts Cocal Users and Alerts Cocal Users and Alerts Storage Storage Storage Storage Storage Sk Management Services and Applications	Volume system (C:) backup (D:) New Volume (F: NA1014008A (E)	A	Type Basic Basic Basic Basic	File System NTF5 NTF5 NTF5 CDF5	Status Healthy (System) Healthy Healthy Healthy
	C Basic 74.52 GB Online	system (C:) 14.75 GB NTFS Healthy (System)	59.	<b>ckup (D:)</b> 77 GB NTFS althy	
	Cisk 1 Basic 2794.42 GB Online	New Volume (F:) 2794.42 GB NTF5 Healthy			
	CD-ROM 0 DVD 163 MB Online  Primary partition	NA1014008A (E: 163 MB CDF5 Healthy Extended partition		al drive	

Repeat the above procedure as needed for any other partitions. Close the Data Management window by clicking on the small boxed "X" in the top right corner of the window. Click on the "My Computer" icon on the Desktop. The new drives will be visible and properly named. The new disks are available for use.

💈 My Computer		
File Edit View Favorites Tools	Help	<b></b>
🜀 Back - 🕥 - 🏂 🔎 Se	earch 😥 Folders 📰 🔻	
Address 🚽 My Computer		🔽 🋃 Go
System Tasks	Files Stored on This Computer	
View system information	Shared Documents Administrator's Document	nts
Other Places	system (C:) System (D:)	
Details 🔹	Devices with Removable Storage	
New Volume (F:) Local Disk File System: NTFS Free Space: 2.72 TB Total Size: 2.72 TB	31/5 Floppy (A:) RA1014008A (E:)	

## 3.5 INSTALLING ON WINDOWS SERVER 2003 (32/64-BIT)

## 3.5.1 INSTALLING SATA RAID HOST BUS ADAPTER

Follow the descriptions below, and step by step to complete the setup.

Insert the Setup and Installation Repository CD in the CD-ROM drive. When start the Windows O/S, new hardware will be found; Select **No, not this time**, than click **Next**>.

Found New Hardware Wizar	d
	Welcome to the Found New Hardware Wizard Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Online privacy information
F	Can Windows connect to Windows Update to search for software? C Yes, this time only C Yes, now and every time I connect a device 1 C No, not this time
	Click Next to continue.
	< Back Next > Cancel

Select Install from a list or specific location (Advanced), than click Next>.

Found New Hardware Wizard	
	This wizard helps you install software for: RAID Controller If your hardware came with an installation CD or floppy disk, insert it now. What do you want the wizard to do? C Install the software automatically (Recommended) ( install from a list or specific location (Advanced)
	Click Next to continue.
	< Back Next > Cancel

Select Search for the best driver in there location, Include this location in the search, and click **Browse** to select the driver path, than click **Next>.** 

	Hardware Wizard
lease	choose your search and installation options.
•	earch for the best driver in these locations.
	se the check boxes below to limit or expand the default search, which includes loca aths and removable media. The best driver found will be installed.
	Search removable media (floppy, CD-ROM)
	Include this location in the search:
2	E:\Driver\Sil3132R5\Windows\32bits
C	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
C	- hoose this option to select the device driver from a list. Windows does not guarante
	e driver you choose will be the best match for your hardware.
	< Back   Next > 3   Canc
Drive	er path for Windows 64-bit:
	er path for Windows 64-bit: Hardware Wizard
New	Hardware Wizard
d New	
l New	Hardware Wizard
l New ease	Hardware Wizard choose your search and installation options.
i New lease	Hardware Wizard choose your search and installation options.
lease	Hardware Wizard choose your search and installation options.
i New lease	Hardware Wizard choose your search and installation options.
i New lease	Hardware Wizard choose your search and installation options. earch for the best driver in these locations. se the check boxes below to limit or expand the default search, which includes loca aths and removable media. The best driver found will be installed.
l New ease	Hardware Wizard choose your search and installation options. earch for the best driver in these locations. se the check boxes below to limit or expand the default search, which includes loca aths and removable media. The best driver found will be installed. Search removable media (floppy, CD-ROM)
i New lease U P	Hardware Wizard choose your search and installation options. Search for the best driver in these locations. se the check boxes below to limit or expand the default search, which includes loca aths and removable media. The best driver found will be installed. Search removable media (floppy, CD-ROM) Include this location in the search: E:\Driver\Sil3132R5\Windows\64bits Include Search
i New lease U P 2 C [	Hardware Wizard choose your search and installation options. Search for the best driver in these locations: se the check boxes below to limit or expand the default search, which includes loca aths and removable media. The best driver found will be installed. Search removable media (floppy, CD-ROM) Include this Igoation in the search: E:\Driver\Sil3132R5\Windows\64bits   Erowse Qon't search. I will choose the driver to install.
d New lease U P 2 C C C	Hardware Wizard choose your search and installation options. earch for the best driver in these locations. se the check boxes below to limit or expand the default search, which includes loca aths and removable media. The best driver found will be installed. Search removable media (floppy, CD-ROM) Finclude this Igoation in the search: [E:\Driver\Sil3132R5\Windows\64bits] Don't search. I will choose the driver to install. hoose this option to select the device driver from a list. Windows does not guarante
i New lease U P 2	Hardware Wizard choose your search and installation options. Search for the best driver in these locations: se the check boxes below to limit or expand the default search, which includes loca aths and removable media. The best driver found will be installed. Search removable media (floppy, CD-ROM) Include this Igoation in the search: E:\Driver\Sil3132R5\Windows\64bits   Erowse Qon't search. I will choose the driver to install.
ease	Hardware Wizard choose your search and installation options. earch for the best driver in these locations. se the check boxes below to limit or expand the default search, which includes loca aths and removable media. The best driver found will be installed. Search removable media (floppy, CD-ROM) Finclude this Igoation in the search: [E:\Driver\Sil3132R5\Windows\64bits] Don't search. I will choose the driver to install. hoose this option to select the device driver from a list. Windows does not guarante
New ease U P 2 C [ C	Hardware Wizard choose your search and installation options. earch for the best driver in these locations. se the check boxes below to limit or expand the default search, which includes loca aths and removable media. The best driver found will be installed. Search removable media (floppy, CD-ROM) Finclude this Igoation in the search: [E:\Driver\Sil3132R5\Windows\64bits] Don't search. I will choose the driver to install. hoose this option to select the device driver from a list. Windows does not guarante

When the installation has completed, click Finish.

Found New Hardware Wizard	Completing the Found New Hardware Wizard The wizard has finished installing the software for: Silicon Image Sil 3132 SoftRaid 5 Controller
5	Click Finish to close the wizard.

## 3.5.2 INSTALLING SATARAID5 UTILITY

Follow the descriptions below, and step by step to complete the installation. Open the **Setup and Installation Repository CD** and select the **SATARAID5 Array Manager** software from the Utility folder.

Double-click the utility file.

# Utility for Windows 32-bit:	
E:\CFI-B4043ER\Utility\Windows\32bits	
Eile Edit View Favorites Tools Help	
🔇 Back 👻 🕤 🖌 🇊 🔎 Search 🌔 Folders 🛛 🚱	3 × 9 📰 -
Address E:\Utility\SiI3132R5\Windows\32bits	💌 🄁 Go
3132-W-I32-R.msi         Windows Installer Package         16,487 KB         releasenote.txt         Text Document         1 KB	

# Utility for Windows 64-bit:



Click **<u>N</u>ext>** to begin setup.

3132-W-I32-R SATARAID5			
Welcome to the 3132- Wizard	₩-132-R SAT	ARAID5 Set	up 👔
The installer will guide you through the computer. To continue, click Next.	steps required to ins	tall 3132-W-132-R SAT	ARAID5 on your
	Cancel	< <u>B</u> ack	Next >

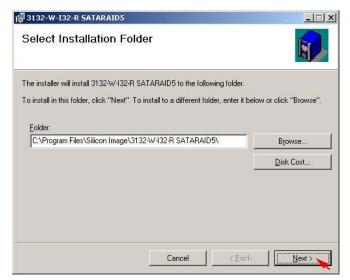
Select I Agree, than click Next>.

3132-W-I32-R 5ATARA	ID5	
_icense Agreeme	nt	R.
Please take a moment to read Agree", then "Next". Otherwi	d the license agreement now. If you accep se click "Cancel".	t the terms below, click "I
SOF	Silicon Image, Inc. TWARE LICENSE AGREEMI	ENT
1070.771.770.		
CAREFULLY BEI USING THE SOFT	HE FOLLOWING TERMS AN FORE DOWNLOADING, INS FWARE OR ANY ACCOMPA ION (COLLECTIVELY, THE "	FALLING OR NYING

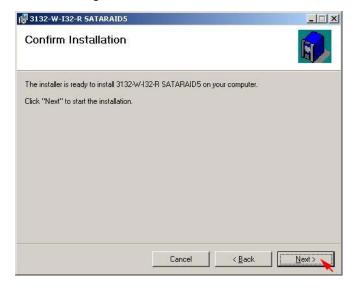
Select Place shortcut on Desktop, than click <u>Next></u> to create a shortcut on the desktop.

🖶 3132-₩-132-R 5ATARAID5			_ 🗆 🗙
Do you want to add a sh			
1 Place shortcut on Desktop			
	Cancel	< <u>B</u> ack	Next > 2

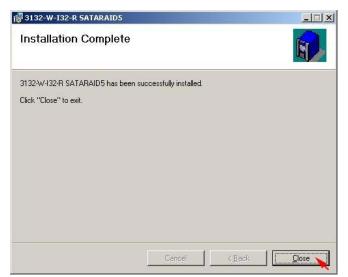
Click **Next>** to use the default installation folder.



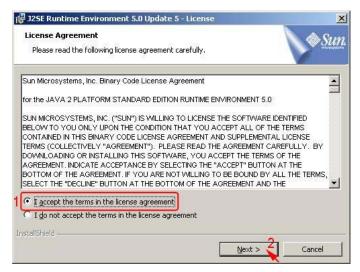
Click **<u>Next></u>** to begin the installation.



When SATARAID5 installation has completed, click **Close** to exit.



Select I <u>accept the terms in the license agreement</u>, than click <u>Next></u> to begin the Java platform installation.



Select Typical, than click Next>.

	e Environment 5.0 Update 5 - Setup Type	2
Setup Type Choose the	setup type that best suits your needs.	ur
	a setup type. You can change your choice of features after installation by d/Remove Programs utility in the Control Panel.	
1 • Typical	All recommended features will be installed.	
C Custom	Specify the installation directory and choose which program features to install. Recommended for advanced users.	
stallShield ——	< Back Next > Cancel	

When Java platform installation has completed, click **<u>Finish</u>** to exit.

🙀 J25E Runtime Environmen	it 5.0 Update 5 - Complete	×
	Installation Completed	
	The Install Wizard has successfully installed J2SE Runtime Environment 5.0 Update 5. Click Finish to exit the wizard,	
Sun Java		
	< Back, Finish Cancel	

Select Start > All Programs > Silicon Image > SATARaid5Manager to start the Array Manager software.

## 3.5.3 DISK DRIVE MODE SETUP

Please refer to the chapter 4.

## **3.5.4 ALLOCATING PARTITIONS**

Before creating any partitions, RAID groups must first be created using the SATARaid5Manager utility. Once the sets have been created, allow the system to load Windows.

Right-click on My Computer icon and select Manage from the pop-up menu.

Recycle Bin SATARaid5		
Administrator Manage Your Server Command Prompt Windows Explorer MWSnap All Programs	Image: Second Computer         Image: Control Panel         Image: Control Panel <th><section-header><section-header><section-header><section-header><text></text></section-header></section-header></section-header></section-header></th>	<section-header><section-header><section-header><section-header><text></text></section-header></section-header></section-header></section-header>
persont j 🕑 😸 🗍		10 X 20 PM

Select Disk Management under Storage to view the disk drives.

B Eile Action ⊻iew Window Help ← → € 🖬 😤 😹					<u>_8</u> >
Computer Management (Local) System Tools	Volume System (C:)	Layout Partition	Type Basic	File System	Status Healthy (System)
Event Viewer     Shared Folders     Local Users and Groups     Performance Logs and Alerts	Backup (D:)	Partition Partition	Basic Basic	NTFS CDFS	Healthy Healthy
					j
Disk Defragmenter	CDisk 0 Basic 74.52 GB Online	<b>system (C:)</b> 14.75 GB NTFS Healthy (Syster	n)	<b>backup (</b> 59.77 GB N Healthy	
	CD-ROM 0 DVD 163 MB Online	NA1014008A 163 MB CDFS Healthy	(E:)		
	Primary partition	Extended part	ition 📕 Lo	gical drive	

When Initialize and Convert Disk Wizard appears, click Next>.

Initialize and Convert Disk ¥	Vizard	×
	Welcome to the Initialize and Convert Disk Wizard         This wizard helps you to initialize new disks and to convert empty basic disks to dynamic disks.         You can use dynamic disks to create software-based volumes that can be mirrored, or they can be striped or spanned across multiple disks. You can also expand single-disk and spanned volumes without having to restart the computer.         After you convert a disk to dynamic, you can only use Windows 2000 and later versions of Windows on any volume of that disk.         To continue, click Next.	
	K Back Next > Cance	el

Select the new disk to initialize, than click  $\underline{N}ext$ >.

n access it.

Do not click any disk to convert, than click Next>.

ialize and Convert Disk Wizard			-
Select Disks to Convert The disks you select will be converted to dyna	mic disks.		
Select one or more disks to convert:			
Disks:			
		Next > 2	Cancel

Initialize and Convert Disk W	/izard	2
	Completing the Initialize and Convert Disk Wizard You have successfully completed the Initialize and Convert Disk Wizard. You selected the following settings: Initialize to MBR: Disk 1 Convert: None	
	To close this wizard, click Finish.	

When the Initialize and Convert Disk Wizard has completed, click Finish.

Windows Server 2003 SP1 or later system supports GPT disk which supports disk volume greater than 2TB.

Ecomputer Management     Ele Action View Window Help     ← →	)				×
Computer Management (Local)  Computer Management (Local)  Computer Management (Local)  Computer Management  Compu	Volume System (C:) backup (D:) NA1014008A (E	Layout Partition Partition E:) Partition	Type Basic Basic Basic	File System NTFS NTFS CDFS	Status Healthy (System) Healthy Healthy
	Colline	<b>system (C:)</b> 14.75 GB NTFS Healthy (System)	59.	<b>ckup (D:)</b> 77 GB NTFS althy	
	Cisk 1 Basic 2794.53 GB Online	2048.00 GB Unallocated		746.54 GE Unallocate	
	CD-ROM 0 DVD 163 MB Online	NA1014008A ( 163 MB CDFS Healthy	(E:)		
	Unallocated	Primary partition	Extended p	artition 📕 Logica	I drive

Right-click on the **Basic disk** and select **Convert to GPT disk** from the pop-up menu.

具 Computer Management (Local)	Volume	Layout	Туре	File System	Status
System Tools     Generation of the system Tool	System (C:) backup (D:) NA1014008A (E	Partition Partition (:) Partition	Basic Basic Basic	NTFS NTFS CDF5	Healthy (System Healthy Healthy
	CDisk 0 Basic 74.52 GB Online	<b>system (C:)</b> 14.75 GB NTFS Healthy (System	59.	<b>ckup (D:)</b> 77 GB NTFS althy	
	CPDisk 1 Basic 2794.53 GB Online	2048.00 GB	mic Disk	746.54 GI Unallocate	
	CD-ROM 0	Convert to GPT [	Disk 💊		
	DVD 163 MB	Properties			
	Online	Help			

Right-click on the **Unallocated** partition and select **New Partition...** from the pop-up menu.

📕 Eile Action <u>View W</u> indow <u>H</u> elp	)				_B×
Computer Management (Local)     Computer Management (Loca	Volume System (C:) backup (D:) NA1014008A (E:	Layout Partition Partition ) Partition	Type Basic Basic Basic	File System NTFS NTFS CDFS	Status Healthy (System) Healthy Healthy
Performance Logs and Alerts     Device Manager     Storage	•			1	1
Bootage     Gootage     Gootage     Disk Defragmenter     Disk Management     Services and Applications	CPDisk 0 Basic 74.52 GB Online	<b>system (C:)</b> 14.75 GB NTF5 Healthy (System)	59	<b>ckup (D:)</b> .77 GB NTFS althy	
	CDisk 1 Basic 2794.42 GB Online	2794.42 GB Unallocated		<u>N</u> ew Par Properti	
	DVD 163 MB Online	NA1014008A ( 163 MB CDFS Healthy	E:)	Help	

Click  $\underline{N}ext$ > to create a partition on a basic disk.

New Partition Wizard	×
	Welcome to the New Partition Wizard This wizard helps you create a partition on a basic disk. A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. Partitions created on Master Boot Record (MBR) disks can be accessed from any version of Windows or MS-DDS. Partitions created on GUID Partition Table (GPT) disks can only be accessed from Windows Server 2003 Service Pack 1 or later, or from any 64-bit version of Windows. To continue, click Next.
	< Back Next > Cancel

Select the partition to create, than click Next>.

w Partition Wizard	
Select Partition Type There are three types of partitions: prin	nary, extended, and logical.
Select the partition you want to create:	
1 • Erimary partition	
C Extended partition	
C Logical drive	
Description	
Windows and other operating syste create up to 128 primary partitions of	create using free space on a basic disk. rms can start from a primary partition. You can on a GPT basic disk. On a Master Boot create up to four primary partitions or three partition.
	< <u>B</u> ack <u>N</u> ext > Cancel

Specify the partition size you want to create, than click Next>.

Specify Partition Size Choose a partition size that is between t	the maximum and minimum sizes.
Maxium disk space in megabytes (MB): Minimum disk space in MB: <u>P</u> artition size in MB:	2861487 8 1 2001407 ÷
	< Back Next > Cancel

Assign the drive letter or path you want to create, than click Next>.

ew P	artition Wizard	
As	sign Drive Letter or Path For easier access, you can assign a drive letter or drive path to your partition.	
4	Assign the following drive letter:     F	
	Mount in the following empty NTFS folder:     Browse	
	C Do not assign a drive letter or drive path	
	< <u>B</u> ack <u>N</u> ext >	Cancel

Click Format this partition with the following settings and Perform a quick format, setup the File system, Allocation unit size, Volume label, than click Next>.

Choo	ose whether you want to form	nat this partition, and if so	o, what settings yo	u want to use.
C	Do not format this partition	r		
1	Format this partition with t	ne following settings:		
	<u>F</u> ile system:	NTFS	-	
3	Allocation unit size:	Default	•	
	<u>V</u> olume label:	New Volume		
2	Perform a quick form	nat		
_	<u>Enable file and folde</u>	er compression		

New Partition Wizard		2
	Completing the New Partition Wizard You have successfully completed the New Partition Wizard. You selected the following settings: Partition type: Primary partition Disk selected: Disk 1 Partition size: 2861487 MB Drive letter or path. F: File system: NIFS Allocation unit size: Default Volume label: New Volume Duick format: Yes	
	To close this wizard, click Finish.	el

When the **New Partition Wizard** has completed, click **Finish**.

The status of the newly created partition in the Disk Management window should change to Formatting and the percentage complete will be displayed. Depending upon the size of the partition, the format process may take several minutes. When complete, the status will change to "Healthy" and the name and drive letter will be updated. Once the disk reports Healthy, it appears in the listing in System Listing section with all of its pertinent information as well.

📮 Computer Management					<u>×</u>
🗐 Eile Action Yiew Window Help					<u>_8×</u>
⇔ ⇒ € 🖪 🔮 🐼 X 📽 🛛	ê 🔯 😼				
Computer Management (Local)	Volume	Layout	Туре	File System	Status
E 🕵 System Tools	system (C:)	Partition	Basic	NTFS	Healthy (System)
	Backup (D:)	Partition	Basic	NTFS	Healthy
	New Volume (F:		Basic	NTES	Healthy
Performance Logs and Alerts	A1014008A (E	:) Partition	Basic	CDFS	Healthy
Device Manager	•			J	•
Storage     Storage     Storage     Six Defragmenter     Disk Management     Services and Applications	Cisk 0 Basic 74.52 GB Online	system (C:) 14.75 GB NTFS Healthy (System)	59.	<b>ckup (D:)</b> .77 GB NTFS althy	
	CPDisk 1 Basic 2794.42 GB Online	New Volume (1 2794.42 GB NTF9 Healthy			
	DVD 163 MB Online	NA1014008A ( 163 MB CDFS Healthy	(E:)		
	Primary partition	n 📕 Extended partiti	on 📕 Logi	cal drive	

Repeat the above procedure as needed for any other partitions. Close the Data Management window by clicking on the small boxed "X" in the top right corner of the window. Click on the "My Computer" icon on the Desktop. The new drives will be visible and properly named. The new disks are available for use.

💈 My Computer	
<u> Eile Edit View Favorites Iools H</u> elp	27
🕓 Back 👻 🕤 🖌 🍠 🔎 Search 🌔 Folders 🛛 🕼 🌛 🗙 🍤 🛄 🛨	8
Address 😼 My Computer	💌 🄁 Go
Hard Disk Drives	
system (C:) Solution (D:)	
Devices with Removable Storage	
31/2 Floppy (A:) NA1014008A (E:)	

## 3.6 INSTALLING ON WINDOWS VISTA (32/64-BIT)

## 3.6.1 INSTALLING SATA RAID HOST BUS ADAPTER

Follow the descriptions below, and step by step to complete the setup.

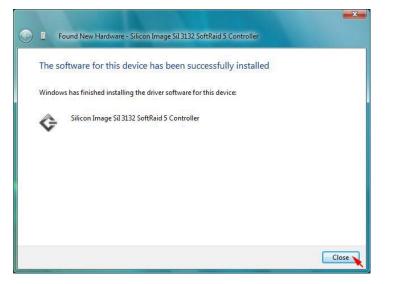
Insert the Setup and Installation Repository CD in the CD-ROM drive. When start the Windows O/S, new hardware will be found; Select **Locat and install driver software** (recommended).



Insert the disc that came with your RAID Controller, than click Next.



When the installation has completed, click Close.



## 3.6.2 INSTALLING SATARAID5 UTILITY

Follow the descriptions below, and step by step to complete the installation.

Open the **Setup and Installation Repository CD** and select the **SATARAID5 Array Manager** software from the Utility folder.

Double-click the utility file.

							- 0 <u>- ×</u>
Favorite Links     Name     Size     Type     Date modif     Location       Documents     Files Currently on the Disc (2)     Image: Constant of the Disc (2)     Image: Constant of the Disc (2)     Image: Constant of the Disc (2)       Pictures     3132-W-B2-R Windows Installer Package     Image: Constant of the Disc (2)     Image: Constant of the Disc (2)       Music     3132-W-B2-R Windows Installer Package     Image: Constant of the Disc (2)     Image: Constant of the Disc (2)       Music     Secretly Changed     Searches     Searches     Image: Constant of the Disc (2)	🕞 🔵 🗢 📕 « SiB132R	5 🕨 Windo	ws 🕨 32bits	-	♦ Search		ر
Parotifie Links     Files Currently on the Disc (2)       Documents     3132-W-B2-R       Windows Installer Package     Teleasenote       Music     16.0 MB       Recently Changed     Searches	🎍 Organize 👻 📇 Views	s 🔻 🚯 B	um to disc				(
Pictures     3132-W-B2-R     releasenote       Windows Installer Package     Text Document       Music     16.0 MB       Recently Changed       Searches	Favorite Links	Name	Size	Туре	Date modif	Location	
	Music Recently Changed Searches	1	Windows Insta	ller Package	Text D	ocument	
	Folders			12/12/2006 10			

🄄 Organize 🔻		😢 Burn to disc				(?
Favorite Links Favorite Links Comments Favorite Links Facor Comments Facor Commen	ged	s Currently on the 3132-W-A64-		Pate modif release Text D 530 by	note	<i>,</i>
	-W-A64-R lows Installer Pa	ckage Si	ed: 12/12/2006 10:1 ize: 16.1 MB ed: 12/12/2006 10:1			1

Click **<u>N</u>ext>** to begin setup.



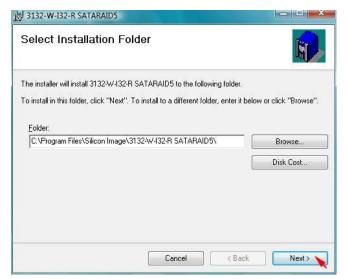
Select I Agree, than click Next>.

J 3132-W-I32-R SATARAI	D5	
License Agreeme	ent	<b>R</b>
Please take a moment to rea Agree", then "Next". Otherw	d the license agreement now. If you a ise click "Cancel".	accept the terms below, click "I
SOF	Silicon Image, Inc. TWARE LICENSE AGREI	EMENT
CAREFULLY BE USING THE SOF	HE FOLLOWING TERMS FORE DOWNLOADING, I IWARE OR ANY ACCOM ON (COLLECTIVELY, TE	INSTALLING OR IPANYING
THE TERMS AND	D CONDITIONS OF THIS	SOFTWARE -
🔘 I Do Not Agree	1 💿 I Agree	
	Cancel	< Back Next > 🔪

Select Place shortcut on Desktop, than click <u>Next></u> to create a shortcut on the desktop.

뉞 3132-W-132-R SATARAID5 Do you want to add a sh	ortcut to yo	ur Desktop?	·
1 V Place shortcut on Desktop			
	Cancel	< Back	Next > 2

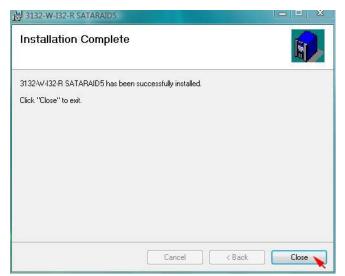
Click Next> to use the default installation folder.



Click **Next>** to begin the installation.

岗 3132-W-I32-R SATARAID5	
Confirm Installation	
The installer is ready to install 3132-W-I32-R SATARAID5 on your computer.	
Click "Next" to start the installation.	
Cancel Cask	Next > 🔪
	~

When SATARAID5 installation has completed, click **Close** to exit.



Select I <u>accept the terms in the license agreement</u>, than click <u>Next></u> to begin the Java platform installation.



Select **Typical**, than click **Next>**.

J2SE Runtim	e Environment 5.0 Update 5 - Setup Type	L X
Setup Type		& Sun
Choose the	setup type that best suits your needs.	mines your
	t a setup type. You can change your choice of features after installation d/Remove Programs utility in the Control Panel.	by
1 💿 Typical	J	
1	All recommended features will be installed.	
Custom		
1	Specify the installation directory and choose which program features to install. Recommended for advanced users.	
InstallShield		)
	< Back Next >	Cancel

When Java platform installation has completed, click **Finish** to exit.

岁 J2SE Runtime Environment	t 5.0 Update 5 - Complete
	Installation Completed
	The Install Wizard has successfully installed J2SE Runtime Environment 5.0 Update 5. Click Finish to exit the wizard.
♦ <u>Sun</u> Java	
	< Back Finish Cancel

Select Start > All Programs > Silicon Image > SATARaid5Manager to start the Array Manager software.

### 3.6.3 DISK DRIVE MODE SETUP

Please refer to the chapter 4.

## **3.6.4 ALLOCATING PARTITIONS**

Before creating any partitions, RAID groups must first be created using the SATARaid5Manager utility. Once the sets have been created, allow the system to load Windows.

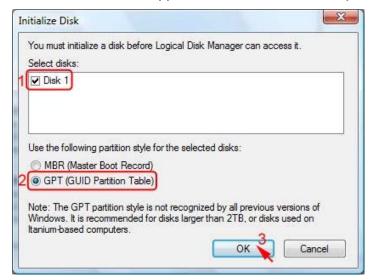
Right-click on My Computer icon and select Manage from the pop-up menu.

Recycle Bin					(+ + )
SATARaid5					
Intern	n <b>et</b> et Explorer				
E-mail Windo	l ows Mail	СҒІ			View headlines
Welco	ome Center	Documents			
👩 Windo	ows Media Center	Pictures Music			
Windo	ows Ultimate Extras	Games			
Windo	ows Media Player	Search			8 7 6 5
Windo	ows Photo Gallery	Recent Items 🕨			
Kinde	ows Live Messenger Download	Computer	Open		
Windo	ows DVD Maker	Network	Explore Search		
Windo	ows Meeting Space	Connect To	Manage 🔪		
		Control Panel	Map Network Drive Disconnect Network Drive		
		Default Programs	Show on Desktop		
> All Pro	ograms	Help and Support	Rename		
Start Search	م		Properties		
				and the second s	
- (Table ) 📼	🖻 🖉				📑 🔂 🕩 11:22 AM

Select Disk Management under Storage to view the disk drives.

File Action View Help	3							
🛃 Computer Management (Local)	Volume	Layout	Туре	File System	Status			Actions
System Tools	📾 system (C:)	Simple			Healthy (System, Boot, Page File	e, Active, Crash Dump, Primary	Partition)	Disk Management
O Task Scheduler     Event Viewer     S Shared Folders	Basic NTFS Healthy (Logical Drive)     MA1014008A (E:) Simple Basic CDFS Healthy (Primary Partition)							More Actions +
<ul> <li>b Arr Local Users and Groups</li> <li>b Br Reliability and Performance</li> </ul>	< [			ш			•	
Device Manager	Disk 0							
<ul> <li>Storage</li> <li>Disk Management</li> <li>Services and Applications</li> </ul>	Basic 74.53 GB Online	system (0 14.75 GB N Healthy (9	NTFS	Boot, Page Fi	backup (D:) 59.77 GB NTFS Healthy (Logical Drive)	9 MB Unall		
	CD-ROM 0 DVD 95 MB Online	<b>NA10140</b> 95 MB CD Healthy (F	FS	: <b>:)</b> Partition)				
	Unallocated Pr	imary partitic	on 📕 E	xtended partition	n 🧧 Free space 📘 Logical drive			

When Initialize Disk Wizard appears, select Disk 1 and GPT (GUID Partition Table), than click OK.



Windows Vista system supports GPT disk which supports disk volume greater than 2TB.

🚰 Computer Management (Local)	Volume	Actions		
System Tools	i system (C:)		Healthy (System, Boot, Page File, Active, Crash Dump, Primary Partition)	Disk Management
<ul> <li>O Task Scheduler</li> <li>Event Viewer</li> <li>Shared Folders</li> </ul>	backup (D:) Simple Basic NTFS Healthy (Logical Drive)     ANA1014008A (E:) Simple Basic CDFS Healthy (Primary Partition)			
<ul> <li>b Mathematical Users and Groups</li> <li>b Mathematical Users and Performance</li> </ul>	•	Ш	•	4
Bevice Manager     Storage     Disk Management     Services and Applications	Basic 74.53 GB Online	<b>system (C:)</b> 14.75 GB NTFS Healthy (System, Boot, Page Fi	backup (D;) 59.77 GB NTFS 9 MB Healthy (Logical Drive) Unall	
	Disk 1 Basic 2794.42 GB Online	2794.42 GB Unallocated		
	CD-ROM 0 DVD 95 MB Online	NA1014008A (E:) 95 MB CDFS Healthy (Primary Partition)		

Right-click on the **Unallocated** partition and select **New Single Volume...** from the pop-up menu.

File Action View Help	8					
Computer Management (Local)	Volume		File System			Actions
<ul> <li>System Tools</li> <li>Task Scheduler</li> <li>Event Viewer</li> <li>Shared Folders</li> </ul>	system (C:) backup (D:) NA1014008A (E	Simple Basic Simple Basic ) Simple Basic	NTFS	Healthy (System, Boot, Page File Healthy (Logical Drive) Healthy (Primary Partition)	e, Active, Crash Dump, Primary Partition)	Disk Management A More Actions
<ul> <li>Mathematical Users and Groups</li> <li>Reliability and Performance</li> </ul>		e				
Device Manager     Storage     Disk Management     Disk Management     Services and Applications	Basic 74.53 GB Online System (C:) 14.75 GB NTFS Healthy (System, Boot, Page Fi		backup (D:) 59.77 GB NTFS 9 MB Fi Healthy (Logical Drive) Unall			
	© Disk 1 Basic 2794.42 GB	2794.42 GB				
	Online	Unallocated		/////////	imple Volume	
	CD-ROM 0 DVD 95 MB	NA1014008A (E:)		New Striped Volume		
	Online	95 MB CDFS Healthy (Primar)	Partition)	Properties Help		
	Unallocated	<sup>o</sup> rimary partition 🔳 B	Extended partition	Free space Logical drive		

Click **<u>N</u>ext>** to create the partition.

New Simple Volume V	izard	23
	Welcome to the New Simple Volume Wizard	
	This wizard helps you create a simple volume on a disk.	
	A simple volume can only be on a single disk.	
	To continue, click Next.	
	< Back Next > 🔪 Can	cel

Specify the partition size you want to create, than click Next>.

Specify Volume Size Choose a volume size that is betwee	en the maximum and minimum sizes.
Maximum disk space in MB: Minimum disk space in MB: Simple volume size in MB:	2861486 8 1 2861486
	< Back Next > 2 Cancel

Assign the drive letter or path you want to create, than click Next>.

For easier	e Letter or Path raccess, you can assign a	a drive letter or drive	path to your partition.	
100				
1 O Assign	the following drive letter:		F 🔹	
O Mount	in the following empty N1	FFS folder:		
		Br	owse	
Do not	t assign a drive letter or dr	ive path		

Click Format this partition with the following settings and Perform a quick format, setup the File system, Allocation unit size, Volume label, than click Next>.

Choo	se whether you want to fom	nat this volume, and if so	what settings you	want to use
16	) Do not format this volume	<u>( )</u>		
	Format this volume with the File system:	NTFS	•]	
3	Allocation unit size:	Default	Ţ	
L	Volume label:	New Volume		
2	📝 Perform a quick form	at		
-	Enable file and folde	r compression		

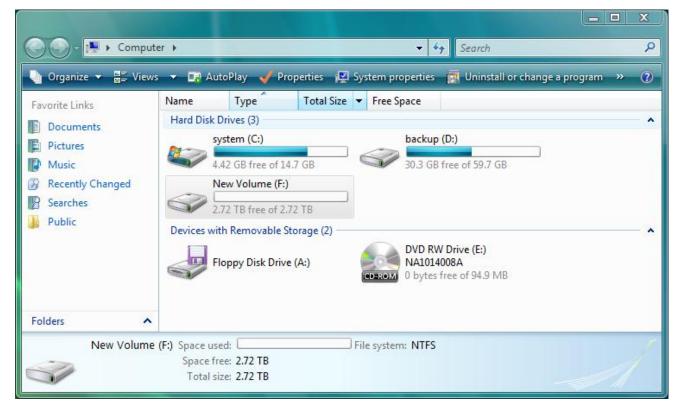
When the **New Partition Wizard** has completed, click **Finish**.

New Simple Volum	Wizard
	Completing the New Simple Volume Wizard
	You have successfully completed the New Simple Volume Wizard.
( <u> </u>	You selected the following settings:
	Volume type: Simple Volume Disk selected: Disk 1 Volume size: 2861486 MB Drive letter or path: F: File system: NTFS Allocation unit size: Default Volume label: New Volume Quick format: Yes
	To close this wizard, click Finish.
	A Back Finish Cancel

The status of the newly created partition in the Disk Management window should change to Formatting and the percentage complete will be displayed. Depending upon the size of the partition, the format process may take several minutes. When complete, the status will change to "Healthy" and the name and drive letter will be updated. Once the disk reports Healthy, it appears in the listing in System Listing section with all of its pertinent information as well.

🏭 Computer Management				x
File Action View Help				
	1			
🛃 Computer Management (Local)	Volume	Actions		
A 👔 System Tools	system (C:)	Simple Basic NTFS Healthy (System, Boot, Page File, Active, Crash Dump, Primary Partition)	Disk Management	•
Task Scheduler Event Viewer	backup (D:)     New Volume (F	Simple Basic NTFS Healthy (Logical Drive) ) Simple Basic NTFS Healthy (Primary Partition)	More Actions	•
Shared Folders	ANA1014008A (E			
Local Users and Groups	•			
Reliability and Performance	-			
📥 Device Manager 🔺 🚰 Storage	Disk 0			
Disk Management	Basic 74,53 GB	system (C:)         backup (D:)           14.75 GB NTFS         59.77 GB NTFS         9 MB		
Services and Applications	Online	Healthy (System, Boot, Page Fi Healthy (Logical Drive) Unall		
	Disk 1			
	Basic	New Volume (F:)		
	2794.42 GB Online	2794.42 GB NTFS Healthy (Primary Partition)		
		Healury (Filmary Falution)		
	CD-ROM 0			
	DVD 95 MB	NA1014008A (E:) 95 MB CDFS		
	Online	Healthy (Primary Partition)		
	Unallocated	Primary partition 📕 Extended partition 📕 Free space 📒 Logical drive		
	1.		,	
<u></u>				

Repeat the above procedure as needed for any other partitions. Close the Data Management window by clicking on the small boxed "X" in the top right corner of the window. Click on the "My Computer" icon on the Desktop. The new drives will be visible and properly named. The new disks are available for use.



# 4 SATARAID5 ARRAY MANAGER

## **4.1 OVERVIEW**

The SATARAID5 Array Manager is the Graphical User Interfaces (GUI) which allows you to create and manage RAID volumes. The Manager initially shows two windows as seen below.

Controller 0 - Sil3132r5	Channel0	Channel1		
RAID 0 (RG0) Controller 1 - Sil3132r5	ID 0 38.34 GB Available			
	38.34 GB Available	Empty		
	ID 1 38.34 GB Available			
RAID Groups Window	38.34 GB Available 38.34 GB Striped	Empty	Device Configuration	
	ID 2 38.34 GB Available		Window	
	38.34 GB Available 38.34 GB Striped	Empty		
	ID 3 38.34 GB Available	2		
	38.34 GB Available	Empty		
	ID 4			
	Empty	Empty		

The RAID Groups window identifies SATA host adapters and configured RAID groups. For systems with more than one Silicon Image Host Bus Adapter installed, you can switch between cards by selecting the desired card in the RAID Groups Window.

When a controller is selected, the RAID Groups currently defined on that controller are also shown in the RAID Groups Window. Selecting a specific RAID Group will highlight the segments associated with that volume in the Device Configuration Window.

The Device Configuration window identifies all physical drives and their partitions.

Throughout the Manager, different colors are used to indicate the status of the components. The meanings of the colors are:

COLOR	STATUS
Green	Good. The component and all subcomponents are okay.
Yellow	Warning. This component or at least one subcomponent has become degraded and requires service.
Red	Failed. This component or at least one subcomponent has failed.
Grey	Unused.

## **4.2 CREATING RAID GROUPS**

To begin creating a new RAID Group, select "Create RAID Group" from the RAID Group menu or right click on a controller in the RAID Groups window and select "Create RAID Group" from the pop-up menu; you can create more than one RAID volume, but **five disk drives is the limitation for each RAID volume**.

**Note:** The term "right-click" refers to using the secondary button on your mouse to perform the indicated operation. On a Windows system, use the mouse button that you have defined to be the secondary button (by default, that button is on the right side of the mouse, unless you have reconfigured the primary and secondary mouse buttons using Control Panel > Mouse). On a Macintosh system, press and hold the Command (Apple) key and click the mouse.

### **4.2.1 CONTIGUOUS RAID GROUPS**

Contiguous RAID Groups allow the user to select a segment of disk drive or a disk drive. Select the disk and enter the desired values and press Create to create the RAID Group (Example below).

Paramet	ters			Param	eters				
RAID G	roup Label:	Single		RAID	Group Label:	Single	Single		
RAID G	RAID Group: 0				RAID Group: 0				
Configuration: Contiguous				Confi	Configuration: Contiguous				
Capacity: MAX				Capa	city:	MAX	*		
Chunk Size: 8 KB				Chun	Chunk Size: 8 KB				
Rebuild	l Priority:	10	<b>~</b>	Rebu	ld Priority:	10	<b>*</b>		
Path ID	Target ID	Capacity	Starting LBN	Path ID	Target ID	Capacity	Starting LBN		
0	0	76.69 GB	00000000	0	0	76.69 GB	0000000		
0	1	76.69 GB	00000000	0	1	76.69 GB	00000000		
0	2	76.69 GB	00000000	0	2	76.69 GB	00000000		
0	3	76.69 GB 00000000		0	3	76.69 GB	00000000		

#### **4.2.2 CONCATENATED RAID GROUPS**

Concatenated RAID Groups allow the user to select different sized segments for each member of the volume. For Concatenated volumes only, a dialog box will appear allowing the user to select the individual segment sizes from each disk. Enter the desired values and press Create to create the RAID Group (Example below).

reate RA	ID Group			Create	RAID Group										
Parame	eters			Para	ameters			7							
RAID	Froup Label:	Combine		ip Label: Combine		RAID Group Label: Combine				Group Ca	nacity				
RAID C	Group:	0	~	RA	RAID Group:		RAID Group: 0		~		Specify RAID Group Capacity				
	uration:	Concat			nfiguration:	Concate			Segment Path ID	Target ID	Capacity				
Capac	ity:	1 GB	×	Ca	pacity:	1 GB	×		0	0	76.69 GB	~			
Chunk	: Size:	8 KB	×.	Ch	unk Size:	8 KB	×		0	1	76.69 GB	~			
Rebuil	d Priority:	10	~	Re	build Priority:	10	~		0	2	76.69 GB	~			
Path ID		Capacity	Starting LBN	Path	and the second se		Starting LBN		0	3	76.69 GB	~			
0	0	76.69 GB 76.69 GB	00000000	0	0	76.69 GB 76.69 GB	00000000		DAID Over	(198)					
0	2	76.69 GB	00000000	Ū.		76.69 GB	00000000		RAID Grou	1b					
0	3	76.69 GB	0000000	0	3	76.69 GB	0000000		Т	ʻotal Capaci	ty: 306.7 GB				
	Next	Clos	e		Ne	d Close			12	Create	Cancel				

## **4.2.3 STRIPED RAID GROUPS**

Striped RAID Groups allow the user to select minimum of 2 or more disks for each member of the volume. Enter the desired values and press Create to create the RAID Group (Example below).

Group		×	Create RA	in Group		
rs			Param	eters		
oup Label:	RAID_	)	RAID	Froup Label:	RAID_	0
oup:	0	~	RAID	RAID Group:		~
ation:	Striped	Striped		Configuration:		~
	MAX	~	Capac	ity:	MAX	*
ize:	32 KB	~	Chunk	Size:	32 KB	*
Priority:	10	~	Rebui	d Priority:	10	~
Target ID	Capacity	Starting LBN	Path ID	Target ID	Capacity	Starting LBN
0	76.69 GB	00000000	0	0	76.69 GB	00000000
1	76.69 GB	00000000	0		76.69 GB	00000000
2	76.69 GB	00000000	0		76.69 GB	00000000
3	76.69 GB	00000000	0	3	76.69 GB	00000000
i F	Target ID 0 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Target ID         RAID_0           Target ID         Capacity           0         76.69 GB           2         76.69 GB	RAID_0         up:       0         ation:       Striped         MAX       V         ze:       32 KB         Priority:       10         Target ID       Capacity       Starting LBN         0       76.69 GB       00000000         1       76.69 GB       00000000         2       76.69 GB       00000000	up Label:     RAID_0     RAID 0       up:     0     Image: Config       ation:     Striped     Config       ze:     32 KB     Capac       Priority:     10     Chunk       Target ID     Capacity     Starting LBN       0     76.69 GB     00000000       2     76.69 GB     00000000	up Label:       RAID_0         up:       0         ation:       Striped         x:       MAX         ze:       32 KB         Priority:       10         Target ID       Capacity         String B       00000000         1       76.69 GB         2       76.69 GB         00000000       0	nup Label:       RAID_0         nup:       0         nup:       0         ation:       Striped         x       MAX         ze:       32 KB         Priority:       10         Target ID       Capacity         Station Capacity       Stating LBN         Priority:       10         Target ID       Capacity         Target ID       Capacity         Stating LBN       0         0       76.69 GB         0       0         2       76.69 GB         0       0         2       76.69 GB

## **4.2.4 MIRRORED RAID GROUPS**

Mirrored RAID Groups allow the user to select 2 disks for each member of the volume. Enter the desired values and press Create to create the RAID Group (Example below).

reate RAID Group			Create RAI	Create RAID Group		
Parameters			Paramet	ters		
RAID Group Lab	el: RAID_	1	RAID G	RAID Group Label:		1
RAID Group:	0	~	RAID G	roup:	0	~
Configuration:	Mirrore	d 💌	Configu	iration:	Mirrore	d 💌
Capacity:	MAX	~	Capacit	ty:	MAX	~
Chunk Size:	8 KB	~	Chunk 9	Size:	8 KB	~
Rebuild Priority:	10	~	Rebuild	l Priority:	10	~
Check Pointing On (Quick F		eturn Dirty Data fline Raid Grp	Check Pointing On (Quick Restore) Off (Best I/O Perf) Offline Raid G			
Path ID Targe	t ID Capacity	Starting LBN	Path ID	Target ID	Capacity	Starting LBN
0 0	76.69 GB	00000000	0		76.69 GB	00000000
0 1	76.69 GB	0000000	0	1	76.69 GB	00000000
0 2	76.69 GB 76.69 GB	00000000	0	2	76.69 GB	00000000
	1.100.000			15	1	1

## **4.2.5 MIRRORED STRIPED RAID GROUPS**

Mirrored Striped RAID Groups allow the user to select minimum of 4 disks for each member of the volume. Enter the desired values and press Create to create the RAID Group (Example below).

reate RAID Group 🛛 🛛			Cr	Create RAID Group				D	
Paramete	ers			F	Paramet	ters			
RAID Gro	oup Label:	RAID_1	RAID_10		RAID Group Label:		RAID	RAID_10	
RAID Gro	oup:	0	~		RAID G	roup:	0		~
Configur	ation:	Mirrored	d Striped 💌		Configu	iration:	Mirrore	d Striped	~
Capacity	r.	MAX	~		Capacit	ty:	MAX		~
Chunk S	ize:	32 KB	~		Chunk	Size:	32 KB		~
Rebuild	Priority:	10	~		Rebuild	l Priority:	10		~
	Quick Restor Best I/O Perf)		rturn Dirty Data fline Raid Grp		💿 On	Pointing (Quick Resto (Best I/O Perl		eturn Dirty Mine Raid	
Path ID	Target ID	Capacity	Starting LBN	Ē	Path ID	Target ID	Capacity	Starting	LBN
0	0	76.69 GB	00000000				76.69 GB	000000	
0	1	76.69 GB	00000000				76.69 GB	000000	
0	2	76.69 GB 76.69 GB	00000000				76.69 GB	000000	
	Create	Close	2			Create	Clos	e	

## **4.2.6 PARITY RAID GROUPS**

Parity RAID Groups allow the user to select minimum of 3 or more disks for each member of the volume. Enter the desired values and press Create to create the RAID Group (Example below).

Create RAI	) Group		X	Сг	eate RAI	) Group		
_ ⊢Paramet	ers			1	Paramet	ers		
RAID Gr	oup Label:	RAID_	RAID_5		RAID Group Label:		RAID_5	
RAID Gr	oup:	0	~		RAID Gr	oup:	0	~
Configu	ration:	Parity R	AID 💌		Configu	ration:	Parity RAID	~
Capacit	y:	MAX	~		Capacit	y:	MAX	~
Chunk 9	Bize:	32 KB	~		Chunk 8	Size:	32 KB	~
Rebuild	Priority:	10	~		Rebuild Priority:		10	~
Check F	r Shutdown P Pointing (Quick Restol (Best I/O Perf)	re) Parity	eturn Dirty Data fline Raid Grp		Check F	r Shutdown P Pointing (Quick Resto (Best I/O Perf)	re) 📀 Return D	
Path ID	Target ID	Capacity	Starting LBN	Ē	Path ID	Target ID	Capacity Star	ina LBN
0	0	76.69 GB	00000000		0	0	76.69 GB 0000	10000
0	1	76.69 GB	00000000		0		76.69 GB 0000	0000
0	2	76.69 GB	00000000		0	2		0000
0	3	76.69 GB	0000000		0	3	76.69 GB 0000	0000
	Create	Close	•			Create	Close	

## 4.2.7 RAID GROUPS OVERVIEW

RAID Groups allow Enter values in all fields and click Create to create the RAID Group.

FIELD	DEFINITION
RAID Group Label	Enter an identifiable name for the RAID group. This value can be any string (up to 8 characters including blank spaces) to help users identify this volume.
RAID Group	Select a Group ID from the available ID list. The maximum number of RAID Groups per controller is 8, so Group ID can be any number between 0 and 7, inclusive.
Configuration	Select which RAID level is to be used to configure these members:
	Contiguous (for virtual disk).
	<ul> <li>Concatenated (for multiple concatenated segments).</li> </ul>
	Striped (for RAID 0)
	Mirrored (for RAID 1)
	Mirrored Striped (for RAID 10)
	Parity RAID (for RAID 5)
Capacity	Select a value to define the total usable capacity of the RAID Group or manually enter the volume size in gigabytes (GB). Selecting MAX will create the largest RAID set possible with the drive(s) selected.
Chunk Size	Select a value to define the chunk size (stripe size) for performance tuning. In general, large stripe sizes are best for large files that are accessed sequentially (for example, media streaming files) and smaller sizes are better for randomly accessed data like databases. This parameter is not used for Contiguous (JBOD), Concatenated, and Mirrored configurations.
Rebuild Priority	Select a value to identify how quickly the controller should rebuild data on a disk after a hardware failure. A value of 1 is the lowest priority and will take the longest to rebuild. A value of 10 is the highest priority and will rebuild the fastest, but may require more CPU resources, which might affect the computer's performance. This parameter is not used for Contiguous (JBOD), Concatenated, and Striped configurations.
Check Pointing	Click the On or Off button to enable or disable the Check Pointing feature. When Check Pointing is enabled, restoring data is very fast after an unexpected power loss, although normal performance may be slightly reduced. When Check Pointing is disabled, normal performance is improved, but restores can take a long time to complete. This selection is only available when the selected RAID configuration is Mirrored, Mirrored Striped or Parity RAID, and the "Advanced RAID Features" checkbox in the Configuration/Advanced Options dialog is checked.
Parity	Click the On or Off button to enable or disable the ability to return "dirty" data after an unexpected power loss and all of the data could not be written to disk, rather than taking the volume off-line. This selection is only available when the selected RAID configuration is Parity RAID and the "Advanced RAID Features" checkbox in the Configuration/Advanced Options dialog is checked.
Devices	Select the RAID member devices from the available device segment grid. Up to five members can be selected for Contiguous, Concatenated, Mirrored, Striped or Parity RAID modes (although Mirrored RAID Groups will typically contain only two members). Exactly four members must be selected for Mirrored Striped mode.

RAID Level	Min # of Disks
0	2
1	2
5	3∗
10	4 <sup>*</sup>
Contiguous	1
Concatenated	1

Once all parameters have been selected, select "Create" to create the RAID Group. When finished, press Cancel to exit the Create RAID Group Dialog.

# 4.3 ADDITIONAL MENU COMMANDS

🗺 SATARAID5 (Array Manager)			
File Device RAID Group Window Leg	acy Support Help		
Controller 0 - Sil3132r5	Channel0 ID 0	Channel1	
RAID Groups Window	Empty ID 1	Empty	Device Configuration Window
Sil3132r5	Empty	Empty	Link Status: Up

#### The Main menu commands are shown below

File	Device	RAID Group	Window	Legacy Support	Help
Configuration	Create Spare	Create RAID Group	Task Manager	Create Legacy RAID Group	Help Topics
Exit	Delete Spare	Rebuild RAID Group	Event Log	Rebuild Legacy RAID Group	About
	Delete Member	Delete RAID Group	Resources	Delete Legacy RAID Group	
	Delete Orphan	Bring RAID Group Online		Convert Legacy RAID Group	
	Make Pass-Thru	RAID Group Summary		Bring Legacy RAID Group Online	
	Device Summary			Create Legacy Spare	
				Delete Legacy Spare	

Convert Legacy Spare

The commands are documented on the pages that follow.

#### **4.3.1 CONFIGURATION**

SATARAID5 configuration options include customization of the settings for **Log File**, **Popup**, and **Advanced Options**. This command displays a dialog box to let user set different configurations for SATARAID5 with the following three tabs:

#### Log File Tab

The Log File tab allows you to define the location and name of the log file. The log file is used to store event information received from all Silicon Image RAID drivers. The log file is a text file and can be viewed with any text viewer (such as "Notepad" on Windows platforms) or with the Event Log window of the SATARAID5 Manager. Use the Log File tab to set the location and the desired filename for the log file.

Configuration Screen	×
Log File Popup Advanced Options	
Log File Information	
The log file is used to preserve events received from the RAID driver. Contents of the log file can be viewed via the 'Event Log' option of the 'Window' menu. The log file generation can be controlled via the radio buttons in the 'Log File Generation' section of this screen. The file name and location can be set in the 'Log File Specification' section of this screen. Contents of the log file can be purged into another file or permanently deleted via the 'Purge' button in the 'Log File Specification' section of this screen.	
Log File Generation	
<ul> <li>Enabled</li> </ul>	
Log File Specification	
Name: eventlog.evl Browse	
Location: Program Files\Silicon Image\SATARAID5 Purge	
<u>O</u> K <u>C</u> ancel	

To specify whether the Log File is generated, click on either the **Disabled** or **Enabled** radio button. If Log File generation is enabled, you can click the **Browse** button to specify the file name and location of the Log File. You can also use the **Purge** button to delete the contents of the Log File.

## Popup Tab

SATARAID5 can be configured to notify the user of events using messages in popup windows. Use the slider control to set the event level for popups to occur:

- Information Level - The following events will trigger a popup window:

- Informational Warnings
- Errors
- Warning Level The following events will trigger a popup window: Warnings Errors
- Error Level The following events will trigger a popup window: Errors
- Disable All No events will trigger a popup window.

Configuration Screen		×
Log File Popup Advance	ed Options	
Popup Window Informati	on	
	ual notification that an event has occurred. n be disabled or set to pop up for only certain	
Event Level Control		
- Informational	Move the slider to set notification level	
– Warning	Error Event Level	
Error	The popup window will be displayed when an ERROR event is generated.	
– Disabled		
	<u>O</u> K <u>C</u> ancel	

## **Advanced Options**

The Advanced Options tab is used to control advanced features of the RAID driver. By default, all these advanced options are disabled.

figuration Screen		
og File Popup Advanced Options		
Advanced Options Information		
This configuration panel allows use of the RAID driver. Please consult n option.		
WARNING: Incorrect usage of some	e optio	ns could result in data loss.
Advanced Options Specification		
Advanced Options Specification		Delete Member Support
		Delete Member Support Resources Info Support
🔽 Legacy (Bootable) Support	1	
🔽 Legacy (Bootable) Support	1	
🔽 Legacy (Bootable) Support	1	

The Advanced Options tab allows you to enable the following advanced features.

FEATURE	EXPLANATION
Legacy (Bootable) Support	When this feature is selected, Legacy Support menu will be available in the menu bar. Enables the Legacy Support menu to support RAID functions for legacy RAID groups (available on Windows platforms only). See Legacy Support menu options.
Delete Member Support	When this feature is selected, Delete Member menu item will be available under the Device menu. Enables the Delete Member option on the Device menu to delete a member from RAID 1 (Mirrored), RAID 5 (Parity RAID), and RAID 10 (Striped and Mirrored) groups. See Delete Member menu option.
Advanced RAID Features	When this feature is selected and user selects to create RAID group, if the RAID group to be created is fault tolerance group (RAID 1, RAID 5, or RAID 10), user will be able to select Improper Shutdown Policy in the Create RAID Group dialog box. Enables the selection of an Improper Shutdown Policy (including Check-Pointing and Dirty Parity handling) in the Create RAID Group dialog box when the selected RAID Group type is a fault-tolerant configuration (Mirrored, Mirrored/Striped and Parity RAID). This feature is not supported for Legacy RAID groups.
Resources Info Support	When this feature is selected, Resources menu item will be available under the Window menu. Enables the Resources option on the Window menu for debugging purposes. See Resources menu option.

## 4.3.2 EXIT

This command terminates the SATARAID5 program.

## 4.3.3 CREATE SPARE

This command displays a dialog box to let user create spare drive, user needs to select the following parameters:

PARAMETER	DESCRIPTION
Spare Type	Choose one of:
	<ul> <li>Global - If the spare drive is for all RAID groups in the system.</li> </ul>
	<ul> <li>Dedicated - If the spare drive is dedicated to the specified RAID group.</li> </ul>
Capacity	If you select Global for the Spare Type, current options from a list of capacity are from 128 MB to 100 GB, HALF and MAX.
RAID Group	If you select Dedicated for the Spare Type, please selected RAID group to which this spare drive is dedicated.
Device Segment	Select one device segment from the available spare type only.

reate Spa	ire		le l
Parame Spare 1	1	al	<b>•</b>
Capaci	ty: MAX		~
Path ID	Target ID	Capacity	Starting LBN
0	2	76.69 GB 76.69 GB	00000000
	Create	e) Clos	e
reate Spa	re	e Clos	e
r <mark>eate Spa</mark> -Paramet	re	e) Clos	e )
	re ers	e Clos	e ) ×
Paramet	re ers ype: Dedi		e )
Paramet Spare T	re ers ype: Dedi oup: O	cated	
Parameti Spare T RAID Gr	re ers ype: Dedi		e  Starting LBN 0000000

Create

Close

## 4.3.4 DELETE SPARE

This menu option displays a dialog box to select (highlight) one or more spare drives to delete.

D	elete Spa	ıre			
	8	Select Spare(s):			
	Device	Туре	RAID Group	Starting LBN	Capacity
	2	Dedicated Spare	0	00000000	76.69 GB
			Delete Ca	ancel	

## 4.3.5 DELETE MEMBER

This menu option displays a dialog box to select (highlight) RAID group members to delete. Because RAID 0 is not fault tolerant, RAID 0 members are not shown in the list.

Note: Deleting members will demote the RAID group to a non-fault-tolerant RAID group.

D	elete RAID	Group Member			
	Select	Member(s) to Del	lete:		
	Device	RAID Group	Member	Capacity	Starting LBN
	0	0	0	76.69 GB	00000000
	1	0	1	76.69 GB	00000000
		Del	ete C	ancel	

#### 4.3.6 DELETE ORPHAN

This menu option displays a dialog box to select (highlight) orphan segments to delete. An orphan segment is part of a RAID group that cannot access other segments within the same RAID group. When a member of a RAID group fails in a severe manner (such as a loss of power or a complete hard disk failure), it becomes an orphan.

This command displays the Delete Orphan Segment window to show all orphan segments and allow user to delete selected orphan segments.

D	elete Orp	han Segme	nt	×
	Sele	ect Orphan(s):		
	Path ID	Target ID	Capacity Starting LBN	Starting LBN
	0	0	76.69 GB	00000000
		Delete	Canc	el

#### 4.3.7 MAKE PASS-THRU

This menu option is not available in this product.

### 4.3.8 DEVICE SUMMARY

This command displays the Segment Summary window to show all physical devices' segments.

File Opti	ions				
Path ID	Target ID	Status	Capacity	Model	Version
0	0	Healthy	160834432	HDS728080PLA380	PF2OA60A
0	1	Healthy	160834432	HDS728080PLA380	PF2OA60A
0	2	Healthy	160834432	HDS728080PLA380	PF2OA60A
0	3	Healthy	160834432	HDS728080PLA380	PF2OA60A
0	4	Empty	Unknown	Unknown	Unknown
1	0	Empty	Unknown	Unknown	Unknown
1	1	Empty	Unknown	Unknown	Unknown
1	2	Empty	Unknown	Unknown	Unknown
1	3	Empty	Unknown	Unknown	Unknown
1	4	Empty	Unknown	Unknown	Unknown

The Segment Summary window has its own menu bar. All options available via the menu bar are shown below

#### File Options

Exit Sorting... Fields...

#### Exit

This command closes the Task Summary window.

## Sorting

This command sorts the rows based on the selected field.

Sort		
Sort items by		
Device	~	<ul> <li>Ascending</li> <li>Descending</li> </ul>
-		<u>K</u> <u>C</u> ancel

#### Fields

This command displays a dialog box to let user choose which fields will be shown in the Segment Summary window.

vevice erial Number	Add	Path ID
erial Number		
	Remove	Target ID Status Capacity Model Version

## 4.3.9 CREATE RAID GROUP

This command displays a dialog box to let user verify a raid type than display Create RAID Group dialog box.



RAID G	roup Label:	Volum	Volume A	
RAID G	roup:	0	0	
Configu	iration:	Contigu	Contiguous 💌	
Capacit	ly:	1 GB	~	
Chunk	Size:	8 KB	8 KB 👻	
Rebuild	l Priority:	10	10 💌	
Path ID	Target ID	Capacity	Starting LBN	
)	0	76.69 GB	00000000	
1	1	76.69 GB	00000000	
l.	2	76.69 GB	00000000	
)	3	76.69 GB	00000000	

## 4.3.10 REBUILD RAID GROUP

This command displays a dialog box to let user choose a replacement segment to rebuild a non-fault tolerant RAID group.

Rebuild RAID G	roup							10
Select a Me	mber to Re	build:		Select	a Replacen	nent Segment:		
RAID Group	Member	Status	Capacity	Path ID	Target ID	Status	Capacity	Starting LBN
0	0	Failed	76.69 GB	0	0	Available	76.69 GB	00000000
			1 C C C C C C C C C C C C C C C C C C C	0	2	Available	76.69 GB	00000000
				0	3	Available	76.69 GB	00000000
								<i>C.</i>
				1				
			Reb	uild Ca	ncel			

## 4.3.11 DELETE RAID GROUP

This command displays a dialog box to let user choose RAID groups to delete.

RAID Group	Configuration	Status
)	Mirrored	Online
1	Mirrored Striped	Online
2	Parity RAID	Online
2	Parity RAID	Online

## 4.3.12 BRING RAID GROUP ONLINE

This menu option is not available in this product.

#### 4.3.13 RAID GROUP SUMMARY

This command displays a dialog box to show all RAID groups' group ID, configuration, and status.

				File Options
Capa	Status	Configuration	Label	RAID Group
20.0 GE	Online	Mirrored	RAID_1	0
40.0 GE	Online	Mirrored Striped	RAID_10	1
40.0 GE	Online	Parity RAID	RAID_5	2
			RAID_10	1 2

The RAID Group Summary window has its own menu bar. All options available via the menu bar are shown below.

File	Options
Exit	Sorting
	Fields

#### Exit

This command closes the RAID Group Summary window.

#### Sorting

This command displays a dialog box to let user choose up to 3 items to sort RAID group items in the RAID Group list.

Ascending     O Descending

#### Fields

This command displays a dialog box to let user choose which fields will be shown in the RAID Group Summary window.

ields		
Available Fields:		Displayed Fields:
ChunkSize Member Count Metadata Format Rebuild Priority	Remove	RAID Group Label Configuration Status Capacity
<u> </u>	Apoly	<u>C</u> ancel

#### 4.3.14 TASK MANAGER

This command displays the Task Manager window. The Task Manager window lists all RAID and disk management tasks that have been started and/or done. This window provides user the ability to schedule any RAID and disk management operations including RAID group creation, rebuild, and test.

File Op	otions Task							
Task	Operation	Parameters	Status	Priority	Progress	Start Time	End Time	Remaining
3	Rebuild RAID Group	Raid Group 0	Active	10	1 %	12/21/05 10:16:43 AM		02:01:54
7	Rebuild RAID Group	Raid Group 1	Active	10	2 %	12/21/05 10:16:46 AM		01:34:46
8	Rebuild RAID Group	Raid Group 2	Active	10	1 %	12/21/05 10:16:48 AM		02:09:20
4	Create RAID Group	Raid Group 2	Canceled	10	1	12/21/05 9:18:50 AM	12/21/05 9:19:41 AM	
3	Create RAID Group	Raid Group 1	Completed	10	1	12/21/05 9:17:56 AM	12/21/05 9:17:56 AM	
2	Create RAID Group	Raid Group 0	Completed	10		12/21/05 9:17:33 AM	12/21/05 9:17:34 AM	
1	Delete RAID Group	Raid Group 0	Completed	0	1	12/21/05 9:16:26 AM	12/21/05 9:16:26 AM	
)	Create RAID Group	Raid Group 0	Completed	10		12/21/05 9:10:21 AM	12/21/05 9:10:21 AM	
5	Create RAID Group	Raid Group 2	Completed	10		12/21/05 9:20:07 AM	12/21/05 10:02:59 AM	

The Task Manager window has it's own menu bar. All options available via the menu bar are shown below

File	Options	Task
Open	Sorting	Modify
Save	Fields	Suspend
Print		Resume
Exit		Cancel
		Delete

### Open

This option will be available in future revisions.

#### Save

This option will be available in future revisions.

#### Print

This option will be available in future revisions.

#### Exit

This command closes the Task Summary window.

#### Sorting

This command displays a dialog box to let user choose up to 3 items to sort task items in the task list.

iort Items by	
End Time	<ul> <li>Ascending</li> <li>Descending</li> </ul>

#### Fields

This command displays a dialog box to let user choose which fields will be shown in the task list.



#### Modify

This command allows user to modify parameters of the selected task items. The following is an example of changing rebuild priority for a rebuild task.

Task Parameters —		
Dynamic Priority:	10	*

#### Suspend

This command allows user to suspend the selected task items.

#### Resume

This command allows user to resume the suspended task items.

#### Cancel

This command allows user to cancel the selected task items.



#### Delete

This command displays a dialog box to let user delete the selected task items from the task list in Task Summary window. The following dialog box will pop up to get confirmation from the user.



### 4.3.15 EVENT LOG

This command displays the Event Log window. The Event Log window displays SATA device-related events that occur while SATARAID5 is running.

File Options	;				
EventDate	EventTime	EventSource	EventType	EventLevel	EventMessage
12/21/05	08:53.22 AM	Controller 0 - Sil3132r5	Controller	Informational	Begin group discovery
12/21/05	08:53.22 AM	Controller 0 - Sil3132r5	Controller	Informational	Initialization Complete
12/21/05	08:53.53 AM	Controller 0 - Sil3132r5	Application	Informational	Database initialized
12/21/05	09:10.21 AM	Controller 0 - Sil3132r5	Device	Informational	Segment created, Pathld 0, Targetid 0, PBN 00000000, Capacity 09962380, Segment Count 1
12/21/05	09:10.21 AM	Controller 0 - Sil3132r5	Device	Informational	Segment created, Pathld 0, TargetId 1, PBN 00000000, Capacity 09962380, Segment Count 1
12/21/05	09:10.21 AM	Controller 0 - Sil3132r5	RAID	Informational	Start Create, Group 0
12/21/05	09:10.21 AM	Controller 0 - Sil3132r5	RAID	Informational	Configure RAID Group task
12/21/05	09:14.04 AM	Controller 0 - Sil3132r5	Device	Error	Device Removed at Pathld 0, TargetId 0
12/21/05	09:20.07 AM	Controller 0 - Sil3132r5	Device	Informational	Segment created, Pathld 0, TargetId 1, PBN 05000000, Capacity 02800000, Segment Count 3
12/21/05	09:20.07 AM	Controller 0 - Sil3132r5	Device	Informational	Segment created, Pathld 0, TargetId 2, PBN 02800000, Capacity 02800000, Segment Count 2

Event Count:11

The Event Log window has it's own menu bar. All options available via the menu bar are shown below

File Options Exit Sorting... Fields...

#### Exit

This command closes the Event Log window.

#### Sorting

This command displays a dialog box to let user choose up to 3 items to sort event items in the event log.

Event	Ascending
	O Descending
Then by	
EventType	<ul> <li>Ascending</li> </ul>
	Descending
Then by	
EventLevel	Ascending
LveniLevei	🗾 C Descending

#### Fields

This command displays a dialog box to let user choose which fields will be shown in the event log.

Fields	
Available Fields:	Add       EventDate         Remove       EventSource         EventType       EventLevel         EventLevel       EventMessage
	Cancel

#### 4.3.16 RESOURCES

This command displays the Resource Information window. This feature is for debugging purpose only.

File Display		
Resource	Current	Maximum
DSRB	2	32
QSRB	12	42
TDB	0	64
DSD	13	50
DBD	1	17

The Event Log window has it's own menu bar. All options available via the menu bar are shown below

File	Display	
Exit	Suspend	Alt+S
	Resume	Alt+R

#### Exit

This command closes the Resources window.

#### Suspend

This command is to suspend the resources informantion.

#### Fields

This command is to resume the resources informantion.

#### 4.3.17 CREATE LEGACY RAID GROUP

This menu option is not available in this product.

## 4.3.18 HELP TOPICS

This command opens an interactive help dialog using the standard Windows help interface. This option will be available in future revisions.

### 4.3.19 ABOUT

This command displays a dialog box with more information about the SATARAID5 program, including the revision level.



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